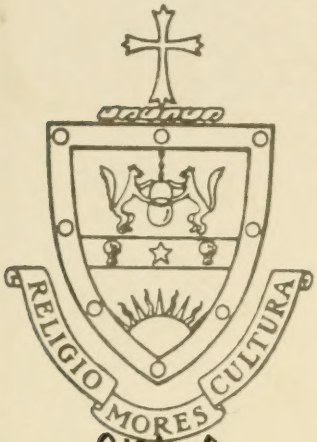
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P. M. BOYLE,
INSPECTOR OF MINES.

Commonwealth of Pennsylvania

REPORT

OF THE

Department of Mines

OF PENNSYLVANIA

Part I—Anthracite

1909

HARRISBURG:
C. E. AUGHINBAUGH, PRINTER TO THE STATE OF PENNSYLVANIA
1910


VIRTUE
LIBERTY AND
INDEPENDENCE

LETTER OF TRANSMITTAL

Department of Mines.
April 27, 1910.

To His Excellency, Edwin S. Stuart, Governor of Pennsylvania:

Sir: In compliance with the Act of Assembly of April 14, 1903, I beg to submit herewith, for transmission to the General Assembly, the report of the Department of Mines for the year ending December 31, 1909. Part I covers in detail the operations in the twenty Anthracite Districts; Part II the operations in the twenty-one Bituminous Districts, as returned by the Inspectors. Observations and suggestions are also offered relative to mining subjects.

Respectfully submitted,

JAMES E. RODERICK,
Chief of Department of Mines.



REPORT

OF THE

DEPARTMENT OF MINES

INTRODUCTION

The production of anthracite coal in Pennsylvania for the year 1909 was 80,223,833 net tons, a decrease from 1908 of 3,319,410 tons. The bituminous output was 136,205,695 net tons, an increase over 1908 of 21,268,320 tons. The two regions still produce about one-half of the entire output of the United States. Pennsylvania has the distinction of producing practically all of the anthracite coal and two and a half times as much bituminous as any other state. The total production is greater than that of any single foreign country except Great Britain, and four times that of Austria-Hungary, five times that of France, and seven times that of Russia. It is estimated by the United States Geological Survey that the amount of anthracite coal still remaining in the ground is approximately 17,000,000,000 tons, and, as about one ton is lost for every ton mined, there is still to be mined about one hundred times the production of the present year. In the bituminous region the amount remaining unmined is approximately 109,000,000,000 tons, or nine hundred times the production of 1909. If in the production of bituminous coal one ton is estimated as lost for every two tons mined, the supply will last for over six hundred years. Making due allowance for inaccuracies in estimates of this kind, it may be safely said, in the light of these figures, that there is no immediate danger of a coal famine.

The shipments of anthracite coal during January, February and March were very heavy, but, after the renewal of the wage scale for the third time for a period of three years, the activity ceased, and during the summer and fall the production was greatly decreased, the principal cause in the latter part of the year being the excessive drought. The production of anthracite, unlike that of bituminous, is restricted to meet the demand. The powers that control it realize that they have a monopoly of an exclusive product and the matter of keeping the supply and demand together is accomplished in a way that is impossible in the bituminous region. The anthracite is yearly becoming more of a luxury, owing to the comparatively small area in which it is mined and the constantly increasing cost of production as the veins run deeper and thinner. Its use is now almost en-

tirely confined to domestic consumption in eastern states. A great amount of the smaller sizes that was formerly wasted is now used for heating purposes and running elevators in office buildings, hotels and apartment houses.

The mining of anthracite coal began in 1814, when 20 tons were produced for local consumption. It was not until 1820 that the anthracite began its career as a commercial factor. In that year 365 tons were shipped to market; since that time more than 2,000,000,000 short tons have been produced.

Prospects for a large output in 1910 are very bright. There is practically no surplus tonnage held in storage and the dealers do not have large stocks on hand. This means great activity in the trade. From all parts of the country come reports of improved industrial conditions and consequently a greater demand for fuel may be expected.

In producing the output for the year 567 persons were killed in the anthracite region and 1,034 were injured. In the bituminous region 506 were killed and 1,126 were injured.

COAL PRODUCTION IN PENNSYLVANIA.

The table herewith shows the average number of days worked in each district during 1909, the production of each district, the average production per day in each district, and the estimated production on a basis of 280 working days; also the total production, the total average production per day and the total estimated production of 280 working days.

Districts	Average number of days worked in breaker	Production	Average production per day*	Estimated production of 280 days*
First,	167	3,378,832	20,233	5,665,240
Second,	211	4,173,443	19,779	5,538,120
Third,	194	4,423,699	22,803	6,384,840
Fourth,	207	4,064,759	19,637	5,498,360
Fifth,	183	3,901,387	21,319	5,969,320
Sixth,	207	4,517,587	21,824	6,110,720
Seventh,	172	5,240,806	30,470	8,531,600
Eighth,	200	3,691,674	18,458	5,168,240
Ninth,	206	5,493,284	26,666	7,466,480
Tenth,	213	3,843,979	18,047	5,053,160
Eleventh,	207	4,487,395	21,678	6,069,840
Twelfth,	208	2,672,515	12,849	3,597,720
Thirteenth,	196	2,765,810	14,111	3,951,080
Fourteenth,	204	2,259,352	11,075	3,101,000
Fifteenth,	206	2,823,003	13,704	3,837,120
Sixteenth,	217	2,523,278	11,628	3,255,840
Seventeenth,	254	3,903,947	15,370	4,303,600
Eighteenth,	204	2,572,378	12,610	3,530,800
Nineteenth,	215	2,710,292	12,606	3,529,680
Twentieth,	239	2,181,002	9,126	2,555,280
Totals and averages,	205	71,628,422	353,993	99,118 040

*Production from washeries not included.

EDUCATION AMONG THE MINING POPULATION

The watchword of today in all lines of activity is progress. There is no standing still. He who fails to go forward goes back. In every trade and every profession success waits upon the man who grasps the opportunities that are presented to him and by constant application and study augments his efficiency. This is truly an era of education, and people of all classes and conditions realize as never before that proper equipment for life's battle means the battle half won. More than this, the employers of labor of all kinds appreciate in a most practical way the advantage of having persons about them who are qualified for their duties. The tendency, therefore, has been towards a general educational uplift of the people, and among the mining population the advancement has been particularly pronounced, notwithstanding the unusual difficulties encountered.

It is a well known fact that the people of the mining regions are principally foreigners who are without education and generally without even a knowledge of the English language, a condition that makes it extremely hard to impart to them even the rudiments of an English education. This deficiency of knowledge on the part of the mine workers, by reason of which they are unable to understand the rules and regulations of the mines, has made them a menace to the safety, not only of themselves, but of their fellow workmen, and realizing this condition and also realizing the necessity for removing it, the operators have for several years been urgent in their demands for the better education of their employes and have been doing everything possible to supply the means for their improvement. The large corporations, particularly in the anthracite region, have instituted courses of lectures and night schools with most gratifying results; the Young Men's Christian Association has assisted nobly in bringing educational advantages to the people who are most in need of them, and the correspondence courses established by the Scranton International Schools have also been productive of much good. So today, it can be said, thanks to the enterprise of the operators, the progressive spirit of the religious organizations and the generosity of the philanthropists, that the men and boys who desire to increase their fund of knowledge regarding the theory and practice of mining may do so under conditions vastly superior to those that existed in the past.

The progress of educational work in mining communities has been truly remarkable, and it is a decided pleasure to know that it has not been confined exclusively to the workers in and about the mines, but that it is touching, in its beneficent sweep, persons of all classes and ages. From the little child who toddles to the kindergarten to acquire the first rudimnets of learning, to the man of mature years who is anxious to augment his deficient mental equipment, the way is open to all who will come, and a kindly encouraging hand is extended to aid the deserving seekers after knowledge.

In the report of this Department for 1908 a rather complete account is given of the educational work being done in the mining communities.

CHILD LABOR

So much concern is manifested in the welfare of the children who have entered the ranks of the bread-winners, and so much is said on the subject through the press and on the platform, that any change in the conditions affecting this large and constantly increasing class of citizens is bound to possess a certain amount of interest. The question of child labor must be approached from two sides in order to arrive at a fair conclusion regarding it. On the one side stands the parent who desires that his child shall aid in the support of the family household and insists upon placing him at work regardless, sometimes, of the privileges and opportunities that are his inherent right. On the other side stands the leader in the cause of child protection, vigilant, aggressive, but, sometimes, over-zealous and impractical. To steer a course safely between these opposing forces of self interest and philanthropic interest is a task that requires some diplomacy and not a little tact. In our treatment of the subject we have always endeavored to keep this question of opposing forces in plain view. However, as the years go by, the pathway of the youthful worker is being gradually freed from the hardships of long hours, unsanitary conditions and inadequate wages, and today he works under conditions of safety, convenience and comfort undreamed of a generation ago.

This Department has direct interest only in the youthful workers in and about the coal mines of the State, and it is a matter of gratification to be able to say that the conditions surrounding this class of workers have greatly improved in the last decade. In addition to the more intelligent and efficient operation of the mines and the consequent betterment in the physical conditions, there has been a gradual decrease in the hours of labor and an increase in the amount of wages paid. The greatest gain, however, has been brought about by the wise and humane legislation regulating the ages of the workers. Years ago little children not more than eight or nine years of age were allowed, and in many cases obliged, to work about the mines, but owing to the enlightened public sentiment that has always opposed the employment of children of tender years in industrial work, and to the more thoughtful and sensible attitude of the operators, the age limit has from year to year been increased until today no child under fourteen years of age can be employed at any work whatever about the mines, and as a rule few children under sixteen years of age are employed inside the mines.

The Act of the General Assembly passed in 1909 fixes the age limit of the boys in and about the mines at fourteen years, and requires of them a certificate from an accredited school official showing them to be familiar enough with the English language to read intelligently portions of the mine law and to write legibly simple sentences.

The Department, while always interested in the welfare of the children employes, has never been required by law to exercise any supervision over them. This latest enactment, however, provides as follows:

"It shall be the duty of the Chief of the Department of Mines to carry out the provisions of this act, and prosecutions for violations thereof shall be instituted by the Chief of the Department of Mines."

The Inspectors throughout the State have, therefore, been instructed to see that the provisions of the law are strictly complied with and that violations thereof are dealt with in a most summary manner. All the superintendents in both the Anthracite and Bituminous regions were written to as follows:

"Dear Sir:

I enclose herewith two copies of an Act regulating the employment of minors in the coal mines of Pennsylvania after January 1, 1910.

You are requested to see that the Act is complied with. The Inspector on his tour will expect and demand to see that you have a certificate for each employe inside and outside of the mines, as required by this Act. It is the opinion of the Department of Mines that each employe between the ages of fourteen and sixteen years should file a certificate, in accordance with this Act, on or before January 1, 1910.

Your attention is called to Section VII of the Act, which reads as follows:

'Section VII. Any person or persons violating any of the provisions of this act shall be deemed guilty of a misdemeanor, and, upon conviction, shall be punished, for a first offense, by a fine of not less than ten dollars or more than twenty-five dollars, or ten days imprisonment in the county jail, or either or both, at the discretion of the court; and, for a second offense, shall be punished by a fine of not more than fifty dollars, and ninety days imprisonment in a county jail, or either or both, at the discretion of the court.

It shall be the duty of the *Chief of the Department of Mines* to carry out the provisions of this act, and prosecutions for violations thereof shall be instituted by the *Chief of the Department of Mines*.'

Upon report from the Inspector of any violation of this Act, the Chief of the Department of Mines will instruct the Inspector to prosecute the person guilty of the offense.

Kindly acknowledge receipt of this letter and copies of the law."

For many years we have advocated the adoption of an age limit similar to that incorporated in the Act of 1909, and as we think a sensible solution has been reached by this Act, we shall make every effort to see that its provisions are complied with.

Our interpretation of the Act of 1909 was that it repealed all previous legislation on the subject of child labor in and about the coal mines and made the age for both inside and outside work fourteen years. The officials of the Pennsylvania Child Labor Association, who were active in the passage of the measure, took a different view and insisted that the Act of 1905, making the age limit for inside work sixteen years, was still in force. The dispute in the matter revolved around the definition of the word "colliery." The Act of 1909 reads as follows:

"No minor child under the age of fourteen years shall be employed, permitted or suffered to work in, about or for any * * anthracite colliery or breaker."

The Department contended that the word "colliery" covers every operation and work, both under and above ground, used or to be used for the purpose of mining and preparing coal. This definition is taken from Article XVIII of the Act of June 2, 1891. In further support of our position on this question the definition of the word "colliery" is given by the Century Dictionary as "a place where coal is dug; a coal mine or pit with the requisite apparatus for working it;" and by Webster's Dictionary "a place where coal is dug; a coal mine and the buildings, and so forth, belonging to it." In addition to this array of authority, it is well known that among the anthracite operators the term "colliery" is a comprehensive term including all the workings of the operation.

The Child Labor Association in its contention held to the opinion that the word "colliery" was used in contra-distinction to the word "mine," and therefore practically covered the outside workings only.

Upon reference of the subject to the Attorney General of the State, the Department received from him an opinion upholding its interpretation of the Act. After reciting parts of the Acts of 1905 and 1909 and citing several legal cases in which the term "colliery" is defined, he gives his opinion as follows:

"This Department is therefore reluctantly forced to the opinion and I so advise you, that the Act of 1909 repeals in toto the Act of 1905, notwithstanding the unfortunate effect of reducing the age at which minors may work in an anthracite coal mine from sixteen to fourteen years."

The correspondence appended may be of interest as indicating the position assumed by the Department and what it is trying to do to make effective the present just and beneficent legislation on the subject.

On the 30th of November copies of the new Act were sent to all the Inspectors and they were instructed as follows:

"Dear Sir:

On your inspection trips after January 1, 1910, you are requested to see that all companies in your district have complied with the provisions of this act; and you are hereby authorized to prosecute according to law any foreman or any other person violating its provisions."

On the 27th of December, further instructions were sent to all the Inspectors as follows:

Dear Sir:

Your attention is again called to the Act, entitled "An act to provide for the health and safety of minors in bituminous coal mines and anthracite collieries or breakers," which will go into effect January 1, 1910.

By the provisions of this Act, the employment age of minors inside and outside the mines is made fourteen years.

Section 5. "The employment certificate provided by this act for the use of a minor between fourteen and sixteen years of age shall be in the following form:

"This certifies that (name and residence of minor) is aged ..... years .....months ..... days; whose complexion is ....., hair is ....., and eyes are .....; is able to read and write the English language intelligently, * * * * *."

Section 7. "Any person or persons violating any of the provisions of this act shall be deemed guilty of a misdemeanor, * * * * * *."

"It shall be the duty of the Chief of the Department of Mines to carry out the provisions of this act, and prosecutions for violations thereof shall be instituted by the Chief of the Department of Mines."

Inasmuch as the Chief of the Department of Mines is the only person authorized to institute prosecutions for violations of this Act, you are hereby directed as follows:

While on your tours of inspection inside and outside the mines, you will interview any employe who, in your opinion, is between the ages of fourteen and sixteen years. Give the person a copy of the Mine Law and see if he can read intelligently; then give him your note book and ask him to write therein what you may dictate to him, giving a few plain, every day sentences. If he fails in either the reading or the writing of the English language intelligently, you will proceed to prosecute the person who gave him a certificate, as provided for in section seven. The Chief of the Department of Mines will hold you, individually, responsible for any violations of this Act in your inspection district.

Very truly yours,

JAMES E. RODERICK,
Chief of Department of Mines.

Information having been received from one of the Inspectors in the Anthracite region that some of the children in the mines in his district were in possession of age certificates that had been issued

to their parents by squires or justices of the peace, and the Inspector having asked for instructions regarding their recognition, he was advised as follows:

"Do not accept any such certificates as you refer to as evidence of boys' ages. This is a way of evading the provisions of the present law that was resorted to in the past to evade the provisions of the old law. It has been conclusively shown that the certificates of parents are valueless, as they (the parents) frequently state that a boy of twelve is sixteen years of age, if that is necessary to obtain employment.

You will accept no certificates from boys of uncertain age, except baptismal certificates. If they cannot be had in this country, you can allow sixty days' time in which to procure them.

Prosecute any foreman who does not have the proper certificates in his possession or who does not promise to procure them, as provided for by the Act of 1909. You will have the foremen suspend all boys that have not deposited certificates as demanded by law."

By reference to Table 1 in this report it will be seen that only five minors between the ages of sixteen and seventeen years and only two between the ages of fourteen and fifteen years were killed inside the mines; only two between the ages of fifteen and sixteen years were killed in the breakers. The Department is of the opinion that the Act of 1909 should be allowed to remain on the statute books as far as it relates to the employment age of minors. There is no valid reason why the employment age of minors in the anthracite region should be higher than in the bituminous region. The dangers encountered inside the mines in the two regions are about the same and the laws governing the two regions should therefore be uniform.

The Act of 1909 is printed herewith:

AN ACT

To provide for the health and safety of minors in bituminous coal mines and anthracite collieries or breakers, by regulating the ages at which said minors may be employed, their hours of employment, and to prescribe rules for the obtaining of employment certificates, and providing penalties for violation of the provisions thereof.

Section 1. Be it enacted, &c., That from and after the passage of this act, no minor under the age of fourteen years shall be employed, permitted, or suffered to work, in, about, or for any bituminous coal mine or anthracite colliery or breaker.

Section 2. That no minor under the age of sixteen years shall be employed, permitted, or suffered to work, in or about or for any establishment or industry named in section one of this act, for a longer period than ten hours in any one day, except when a different apportionment of the hours of labor is made for the sole purpose of making a shorter work-day for one day in the week; nor shall a less period than forty-five minutes be allowed for the midday meal; and in no case shall the hours of labor exceed fifty-eight in any one week. No minor under the age of sixteen years shall be employed or permitted to work between the hours of nine post meridian and six ante meridian.

Section 3. That no minor under the age of sixteen years shall be employed in or about or for any establishment or industry named in section one of this act, unless the employer of said minor procures and keeps on file, and accessible to the mine inspector, the employment certificate as hereinafter provided, issued to said minor, and keeps two complete lists of all minors under the age of sixteen years employed in or for his or her establishment; one of said lists to be kept on file in the office of the employer, and one to be conspicuously posted in each of the several departments in or for which minors are employed. Said employment certificate, when issued, shall be the property of the minor named therein, who shall be entitled to a surrender of said certificate to him or her by the employer whenever said minor shall leave the service of any employer holding said certificate.

Section 4. The employment certificates required by the provisions of this act shall be issued as follows:—

In school districts having a district superintendent or supervising principal, by such superintendent or supervising principal; in school districts having no superintendent or supervising principal, but having one or more principals of schools, by such principals, each principal to issue the certificate to minors residing within the territory belonging to the school over which he has supervision; in school districts, or parts of districts, having no district superin-

tendent or principal, by the secretary of the board of school directors for that district: Provided, That any district superintendent, supervising principal of schools, or secretary of the board of school directors, hereby directed to issue such certificates, may authorize and deputize, in writing, such persons as they may see proper, to act in their place and stead for the purpose of issuing such certificates. Any of the hereinbefore mentioned officials, authorized to issue employment certificates, before doing so shall demand, and if possible obtain, a birth certificate, or baptismal certificate, or passport, or any other official or religious record of the minor's age, or duly attested transcript thereof; or, in the event that none of these is obtainable, may accept, in lieu thereof, the record age as given on the register of a school the minor has attended; or, in the absence of such record, may accept the affidavit of the minor's parent, guardian, or other person, which affidavit he is empowered to administer: Provided, That the powers and duties conferred by this section on the superintendents, supervising principals, principal, or secretary of a board of school directors, be and the same are conferred upon superintendents, supervising principals, principal, teachers, or secretaries of any private academy, parochial or denominational schools, in all cases where the applicant for an employment certificate is, or recently has been, an attendant pupil in a private academy, parochial or denominational school, and is not a pupil in a public school: And provided further, That whenever in any school district an employment certificate is issued by any persons other than the public school official hereinbefore directed to issue such certificates in said district, said persons shall, on or before the third day of each month, file with the aforementioned public school official, in said district, true copies of all employment certificates so issued.

Section 5. The employment certificate provided by this act for the use of a minor between fourteen and sixteen years of age shall be in the following form:—

This certifies that (name and residence of minor) is aged ..... years ..... months .....days; whose complexion is ..... hair is ....., and eyes are .....; is able to read and write the English language intelligently, and may be employed at labor in any bituminous coal-mine or anthracite colliery or breaker.

This certificate is a legal warrant for the employment of the minor hereon, in any of the above-named establishments and industries, under the provisions of an act approved ..... one thousand nine hundred and nine.

(Signature of person who issued certificate, official title and official address.)

(Signature of minor to whom issued.) ..... (Date.)

Section 6. The blank employment certificates shall be prepared by the Superintendent of Public Instruction, in accordance with the form prescribed in this act; the same to be printed in accordance with the laws regulating printing and binding, under the supervision of the Superintendent of Public Printing and Binding. The Superintendent of Public Instruction shall also supply the aforesaid certificates to all persons authorized to issue the same.

Section 7. Any person or persons violating any of the provisions of this act shall be deemed guilty of a misdemeanor, and, upon conviction, shall be punished, for a first offense, by a fine of not less than ten dollars or more than twenty-five dollars, or ten days imprisonment in the county jail, or either or both, at the discretion of the court; and, for a second offense, shall be punished by a fine of not more than fifty dollars, and ninety days imprisonment in a county jail, or either or both, at the discretion of the court.

It shall be the duty of the Chief of the Department of Mines to carry out the provisions of this act, and prosecutions for violations thereof shall be instituted by the Chief of the Department of Mines.

Section 8. All fines imposed and collected for any violation of this act shall be forwarded to the Chief of the Department of Mines, who shall pay the same into the office of the State Treasurer, for the use of the Commonwealth.

Section 9. This act shall be in force and effect on and after January first, one thousand nine hundred and ten.

Section 10. All acts or parts of acts inconsistent with any of the provisions of this act, be and the same are hereby repealed.

Approved—The 1st day of May, A. D. 1909.

EDWIN S. STUART.

PENSIONS FOR WIDOWS AND ORPHANS

The question of rendering financial assistance to widows and orphans who are deprived of the support of husbands and fathers by fatal accidents in our coal mines was dealt with pretty thoroughly in the report of this Department for 1907. Renewed attention has re-

cently been called to the question by the disastrous explosions of the past year, and in a speech delivered a short time ago Mr. John Mitchell gave his views as follows:

"There was a time when criminal law was a matter of private settlement, when a man could atone for the murder of a fellowman by paying a sum of money. Conditions have changed since then, but under the present laws of liability and negligence injured workingmen or their heirs are compelled to prove affirmatively that the accident was not due to the workingman's negligence.

In the matter of cost, the present system governing accidents is wasteful alike to the employer and to the employe. In Illinois there are 70,841 coal miners, earning an average annual wage of $500, or a total of $35,420,500. In 1908 alone there were 183 fatal accidents. Had the employers paid the dependents of the killed workingmen an amount equal to three years' wages, as under the English law, it would have cost them $274,500. There were also 819 non-fatal accidents. Had these men been paid half wages at $6 a week during the period of their disability, as in England, it would have cost $24,570.

Instead of this sum, $299,070, however, it cost the employers under the present liability system $354,505, owing to the expenses of insuring the workingmen and litigation over damages. We want compensation for injuries, instead of a useless expenditure of money in liability insurance and litigation."

If Mr. Mitchell's figures are correct, it is evident that it would be greatly to the advantage of the American operator to secure some philanthropic legislation like the English law. The instance he cites in the case of the Illinois accident is a convincing argument in favor of a change in our methods of rendering assistance to the sufferers from mine accidents. The employers in Illinois paid finally a sum said to be $354,505 during the year 1908, while under the English system the amount would have been but $299,070, and the results obtained would have been infinitely more satisfactory.

The 70,841 miners in Illinois earn an average annual wage of $500, or a total of $35,420,500. If out of this vast sum they were to contribute $299,070 as a protection to widows and a weekly stipend to the injured, it would take only $4.23 of their individual earnings or less than 36 cents a month. Or if they were to donate one per cent. of their annual earnings, the sum would be $354,205; and if the operators were to add an equal amount, there would be a fund of $708,410, which would give each widow $500 a year for six years, and each injured person $9 a week during the term of his disability.

The latter method—the joint contributory system—would seem to be the most equitable that could be adopted and therefore the most satisfactory. In a number of foreign countries, where the matter of old age pensions to employes in all lines of industrial work has been receiving a great deal of attention of late years, contributory insurance funds have been created for the benefit of aged working people, the Government and the working people both contributing to the funds. In France, Germany and Belgium this system has become very popular and points probably to a solution of the tremendous problem that confronts every nation, particularly the foreign nations, —the problem of taking care of their old people. In the United States, where there is more liberty for the laboring classes and more opportunity for earning a sufficient competence for old age, the necessity for age pensions is not so imperative, but some system to take care of the persons who are injured at their work and the persons who are deprived by accident of their means of support should be adopted in all trades, particularly in the mining industry, and the contributory system, as referred to above, meets the necessities of the case perhaps better than any other system that has yet been suggested.

In the report of this Department for the year 1907, a carefully worked-out plan was submitted by which a tax of three-fourths of a cent a ton on the bituminous output of coal and one and a half cents a ton on the anthracite output of coal would provide a fund sufficient to cover the needs of the widows and orphans and also care for the injured. A part of the article is reproduced herewith.

This question is a most vital one and one that appeals very strongly to all persons who are familiar with the conditions under which the miner pursues his vocation. That some practical and permanent system of relief should be adopted is evident, and the joint contributory system is recommended to those who are interested in this question. If it is impossible to adopt a contributory system, then a system of taxation such as has been suggested might with advantage be given a trial.

RELIEF FUND FOR WIDOWS AND ORPHANS AND DISABLED EMPLOYES

(From Department Report of 1907)

"In the Anthracite region, with an annual taxable production of 62,000,000 tons, yielding a tax of one and one-half cents a ton, the fund would be $930,000. The loss of life in the Anthracite mines averages about 573 a year, leaving about 322 widows and 770 orphans. In the Bituminous region from which an annual taxable production of at least 100,000,000 tons may be expected during the next hundred years, the fund at three-quarters of a cent a ton would be about $750,000. The loss of life in the Bituminous mines averages about 475 a year, leaving about 252 widows and 546 orphans. Each widow should receive $100 to defray the funeral expenses and a weekly benefit of $3 during widowhood, and each child under fourteen years of age should receive a weekly benefit of $2.

To care for persons injured in the mines, a portion of the fund in each region, approximately $100,000, could be distributed annually. During disablement each person should receive an amount equal to one-half his daily or weekly earnings, the benefit not to become operative until one week from the date of injury and to continue until he is able to resume work; but in no case should the benefit continue for more than one year. The annual expense entailed by the plan herewith proposed is shown in the following table."

RELIEF FUND FOR WIDOWS AND ORPHANS AND DISABLED EMPLOYES

Anthracite Region of Pennsylvania

Annual Contribution by Co al Companies, $930,000.00.

(One and a half cents a ton on an es timated production of 62,000,000 tons.)

	First year	Second year	Third year	Fourth year	Fifth year	Sixth year	Seventh year
Contribution,	$930,000 00	$930,000 00	$930,000 00	$930,000 00	$930,000 00	$930,000 00	$930,000 00
Balance,		632,188 00	1,168,659 52	1,614,893 90	1,976,589 66	2,259,673 25	2,470,308 18
Interest,		25,287 52	46,746 38	64,595 76	79,063 59	90,386 93	98,812 33
Principal,	$930,000 00	$1,587,475 52	$2,145,405 90	$2,609,489 66	$2,985,653 25	$3,280,060 18	$3,499,120 51
Paid out,	297,812 00	418,816 00	530,512 00	632,900 00	725,980 00	809,752 00	884,216 00
Balance,	$632,188 00	$1,168,659 52	$1,614,893 90	$1,976,589 66	$2,259,673 25	$2,470,308 18	$2,614,904 51

	Eighth year	Ninth year	Tenth year	Eleventh year	Twelfth year	Thirteenth year	Fourteenth year
Contribution,	$930,000 00	$930,000 00	$930,000 00	$930,000 00	$930,000 00	$930,000 00	$930,000 00
Balance,	2,614,904 51	2,700,128 69	2,732,913 84	2,720,470 39	2,670,297 21	2,590,193 10	2,488,268 82
Interest,	104,596 18	108,005 15	109,316 55	108,818 82	106,811 89	103,607 72	99,530 75
Principal,	$3,649,500 69	$3,738,133 84	$3,772,230 39	$3,759,289 21	$3,707,109 10	$3,623,800 82	$3,517,799 57
Paid out,	949,372 00	1,005,220 00	1,051,760 00	1,088,992 00	1,116,916 00	1,135,532 00	1,144,840 00
Balance,	$2,700,128 69	$2,732,913 84	$2,720,470 39	$2,670,297 21	$2,590,193 10	$2,488,268 82	$2,372,959 57

RELIEF FUND FOR WIDOWS AND ORPHANS AND DISABLED EMPLOYES

Bituminous Coal Region of Pennsylvania

Annual Contribution by Coal Companies, $750,000.00.

(Three fourths of a cent a ton on an estimated production of 100,000,000 tons.)

	First year	Second year	Third year	Fourth year	Fifth year	Sixth year	Seventh year
Contribution,	$750,000 00	$750,000 00	$750,000 00	$750,000 00	$750,000 00	$750,000 00	$750,000 00
Revenue,		496,404 00	925,432 16	1,285,173 45	1,585,880 39	1,829,975 61	2,022,058 63
Interest,		19,856 16	36,937 29	51,406 94	63,435 22	73,199 02	80,882 34
Principal,	$750,000 00	$1,266,260 16	$1,710,369 45	$2,086,580 39	$2,399,315 61	$2,653,174 63	$2,852,940 97
Paid out,	253,596 00	340,828 00	425,196 00	500,700 00	569,340 00	631,116 00	686,028 00
Balance,	$496,404 00	$925,432 16	$1,285,173 45	$1,585,880 39	$1,829,975 61	$2,022,058 63	$2,166,912 97

	Eighth year	Ninth year	Tenth year	Eleventh year	Twelfth year	Thirteenth year	Fourteenth year
Contribution,	$750,000 00	$750,000 00	$750,000 00	$750,000 00	$750,000 00	$750,000 00	$750,000 00
Revenue,	2,166,912 97	2,269,513 49	2,335,034 03	2,368,855 39	2,376,573 60	2,364,008 54	2,337,212 88
Interest,	86,676 52	90,780 54	93,401 36	94,754 21	95,062 94	94,560 34	93,488 52
Principal,	$3,003,589 49	$3,110,294 03	$3,178,435 39	$3,213,609 60	$3,221,636 54	$3,208,568 88	$3,180,701 40
Paid out,	734,076 00	775,260 00	809,580 00	837,036 00	857,028 00	871,356 00	878,220 00
Balance,	$2,269,513 49	$2,335,034 03	$2,368,855 39	$2,376,573 60	$2,364,008 54	$2,337,212 88	$2,302,481 40

THE ELECTION OF MINE INSPECTORS

In several of the previous reports of this Department, we have taken occasion to register our protest against the method of selecting mine inspectors in vogue in the anthracite region, that is, by election, and the reasons for the protest have been given as strongly as possible. We desire once more to refer to the subject, even if only to reiterate what has been said before. The election of an officer, such as a mine inspector, is a mistake, for the reason that it places him more or less under the influence of the politicians and the result is that an office that should be conducted solely for the welfare of the people connected with the mining interests is in imminent danger of being perverted to the uses of certain political elements. Unfortunately, back in 1899 and 1900, owing to the dissatisfaction manifested in regard to the inspectors, especially in Schuylkill county, the miners assembled in convention and passed a resolution calling upon the Legislature to amend the existing laws so that the inspectors should be elected by the people instead of being commissioned by the Governor after a competitive examination. Their thought was that objectionable inspectors would thus be removed and they believed that ambitious miners would have a greater opportunity for succeeding to the office. The fact is, however, that the office has always been open to properly qualified miners and has always been filled by men who served for years in that capacity.

The Legislature in 1901 amended article 2 of the Act of 1891 providing that all inspectors in the anthracite region should be elected by the people under the general election law of the State. The candidates, of course, were selected from those men eligible by having passed a successful examination before the Mine Inspectors' Examining Board. Aside from the unfortunate dragging of this position into politics, the method of electing the inspectors is very unfair. Instead of the voters of a certain district electing their inspector, the people in the Eleventh district, for instance, vote for the inspector in the Sixth district, and the voters in the Sixth district vote also for the inspector in the Eleventh district. The vote for each inspector, if the inspectors are to be elected, should be confined to the people residing in his district who are mine workers. The spectacle of an officer of this kind neglecting the duties of his office, possibly, and campaigning among farmers and business men through the country seeking votes is something deplorable. Great dissatisfaction exists in regard to this law and at the last session of the Legislature the anthracite inspectors who have been hampered and annoyed by its provisions prepared and presented a bill to do away with the election of inspectors and have the office filled as is now done in the bituminous region by appointment by the Governor. The bill, however, failed to be reported out of committee. The bituminous law in this respect provides that the Governor shall commission the necessary number of inspectors from the list of successful applicants who have answered correctly 90 per cent. of the questions propounded to them by the Mine Inspectors' Examining Board appointed by the Governor. The applicant having the highest percentage is first commissioned and others are then commissioned in the order of their rating.

MINERS' EXAMINING BOARDS

To stop the further employment of incompetent persons in the anthracite mines of Pennsylvania the Legislature in 1889 passed an act providing for the examination and registration of miners and establishing in each of the anthracite inspection districts a Board designated "Miners' Examining Board." These Boards consisted of nine persons each appointed by the president judge of the proper county from among the most skillful miners in actual practice in the district. The duty of the Boards was to examine all persons who desired to be employed as miners and to grant certificates of competency or qualification to such persons as were qualified to receive them. The act also provided that all persons who were actually employed as miners in the anthracite region at that time were entitled to registration without examination upon the payment to the Board of the fee of twenty-five cents and the submission of satisfactory proof of their employment.

This act did not satisfactorily meet the conditions existing at the time or subsequently, and another act was passed July 15, 1897, with the hope that it would prove more effective. The latter act was entitled "An act to protect the lives and limbs of miners from the dangers resulting from incompetent miners working in the anthracite coal mines of this Commonwealth, and to provide for the examination of persons seeking employment as miners in the anthracite region, and to prevent the employment of incompetent persons as miners in anthracite coal mines, and providing penalties for violations of the same." This act is very comprehensive, covering all points relating to the operation of coal mines as far as they could be covered at that time.

Important clauses read as follows:

Section 1. "That hereafter no person * * shall be employed * * in the anthracite coal region * *, as a miner * *, without having obtained a certificate of competency * * from the 'Miners' Examining Board' of the proper district, and having been duly registered * *."

Section 2. "That there shall be established in each of the eight inspection districts * *, a board to be styled the 'Miners' Examining Board' of the ..... district, to consist of nine miners * * from among the most skillful miners actually engaged * * in their respective districts, * *. Each of said boards shall organize by electing one of their members president, and one member as secretary, and by dividing themselves into three subcommittees for the more convenient discharge of their duties; each of said committees shall have all powers hereinafter conferred upon the board; and whenever in this act the words 'Examining Board' are used, they shall be taken to include any of the committees thereof."

Section 3. "Each of said examining boards shall designate some convenient place within their districts for the meeting of the several committees thereof, * *, and so divided as to reach as nearly as practicable all the mining districts therein; * * *."

Section 4. "Each applicant for examination and registration and for the certificate hereinafter provided, shall pay a fee of one dollar to the said board, * * * *."

Section 5. "That it shall be the duty of each of the said boards to meet once every month and not oftener, and said meeting shall be public, and if necessary, the meeting shall be continued to cover whatever portion may be required of a period of three days in succession, * * * *.

All persons applying for a certificate of competency, or to entitle them to be employed as miners, must produce satisfactory evidence of having had not less than two years' practical experience as a miner, or as a mine laborer in the mines of this Commonwealth, and in no case shall an applicant be

deemed competent unless he appear in person before the said board and *answer intelligently * * twelve questions in the English language* pertaining to the requirements of a practical miner, and be properly identified under oath, as a mine laborer by at least one practical miner holding miner's certificate. The said board shall keep an accurate record of the proceedings of all its meetings, and in said record shall show a correct detailed account of the examination of each applicant, with the questions asked and their answers, and at each of its meetings the board shall keep said record open for public inspection. Any miner's certificate granted under the provisions of this act, * *, shall not be transferable * *, and any transfer of the same shall be deemed a violation of this act. Certificates shall be issued only at meetings of said board, and said certificates shall not be legal unless then and there signed in person by at least three members of said board."

Section 6. "That no person shall hereafter engage as a miner in any anthracite coal mine without having obtained such certificate as aforesaid. * * * Any person * * who shall violate or fail to comply with the provisions of this act, shall be guilty of a misdemeanor, * *."

Section 9. "It shall be the duty of the several Miners' Examining Boards to investigate all complaints or charges of non-compliance or violation of the provisions of this act, and to prosecute all persons so offending; and upon their failure so to do, then it shall become the duty of the district attorney of the county wherein the complaints or charges are made * * *, and it shall at all times be the duty of the district attorney to prosecute such members of the Miners' Examining Board as have failed to perform their duty * * *; but nothing herein contained shall prevent any citizen * * of this Commonwealth, from prosecuting any person * * violating this act, * * *."

This act, however, much as it was desired by the mine workers and effective as it might have been made, has never been properly enforced in any of the anthracite counties. On the contrary, the Boards of Examiners and the members as individuals have vied with one another in their efforts to obtain money from applicants for certificates, utterly regardless of the qualifications of the applicants, with the result that there has been a constant addition to the number of unqualified employes in the mines and they are now filled with ignorant and incompetent men—ignorant as to the English language and incompetent as to the duties that should be performed by practical miners. Foreigners, including the emigrants from the farming districts of Europe, have been supplied with certificates notwithstanding the fact that they were unable to articulate a word of English and had never worked in a coal mine. These certificates were issued in plain violation of section five of the act that demands that an applicant shall have had not less than two years' experience as a miner or as a miner's laborer in the anthracite mines of this State and be able to answer intelligently and correctly at least twelve questions in the English language pertaining to the requirements of a practical miner.

Undoubtedly more care was taken in the selection of men to work in gaseous mines before the Acts of 1889 and 1897 were passed. The mine foremen prior to that time, feeling that they were responsible for the men they employed, insisted upon having men of a reasonable degree of competency and intelligence.

The legal fee of one dollar for certificates, as fixed by the act, was ignored and the unprincipled members of the Boards demanded all the applicants could pay. More than this, they supplied themselves with blank certificates, signed by three members of a Board, and issued them to all applicants at any time and at any place. If a member of a Board was not at home when an applicant called, his wife would enter the applicant's name on the certificate, issue it and collect the money. Some of the members who had supplied themselves with large numbers of blank forms continued to issue them long after they had retired from the Boards. Certificates were also sold in

saloons by the proprietors and bar-tenders. In fact, the violations were so flagrant and the situation had become so acute at the time Mr. McEnaney was elected president of District No. 1 of the United Mine Workers of America in June, 1909, that he determined to have the practice broken up and to have the law enforced if possible. He succeeded so well in creating public sentiment against the existing conditions that the judges of the counties of Lackawanna and Luzerne named new Examining Boards as recommended by the mine workers. But even after these Boards had been appointed violations of the law continued. A case of peculiar enormity occurred in Luzerne county where a prominent mine worker of foreign birth, who had years before been a member of one of the Boards of Examiners, was caught in the back room of a saloon issuing certificates to all applicants who were able to pay the price demanded. The man was arrested and after a hearing before a squire was committed to prison. It is reported that he is now out on bail.

The court of Luzerne named a Board as follows:

"Now, January 22, 1910, the court appoints as the 'Miners' Examining Board' of the First Inspection District, comprising the county of Luzerne, for the term of two years from this date, from among the most skillful miners actually engaged in mining in this district, and who have had five years' practical experience in the same, the following persons, viz: Edward Doggett, Freeland; Jacob Gettinger, Milnesville; Daniel B. Gallagher, Hazleton; Thomas Curtis, Nanticoke; John H. Evans, Plymouth; David Joseph, Wilkes-Barre; Jonathan Perry, West Pittston; James P. Gildea, Plains, and Morris Ryan, Kingston; who are by law charged with these duties, to wit:

(1) To take and subscribe within ten days, an oath or affirmation before a properly qualified officer of the county that they will faithfully and impartially discharge the duties of their office;

(2) To organize by electing one of them president and one of them secretary, and by dividing themselves into three sub-committees for the more convenient discharge of their duties;

(3) To designate some convenient place within the district for the meeting of the several committees, preferably in Hazleton, Nanticoke, Wilkes-Barre and Pittston, of which due notice shall be given by advertisement in two or more newspapers of the county, but in no case shall such meeting be held in a building where intoxicating liquors are sold;

(4) To open at each designated place of meeting a book of registration in which shall be registered the name and address of each and every person duly qualified as an anthracite miner;

(5) To meet by committee aforesaid at each designated place once every month and not oftener, which meeting shall be public and if necessary shall be continued to cover whatever portion may be required of a period of three days in succession;

(6) To examine under oath all persons who shall desire to be employed as miners in the district, but only such as shall appear in person before the committee;

(7) To keep an accurate record of the proceedings at every meeting and in said record to show a correct detailed account of the examination of each applicant, with the questions asked and their answers, and at each of the meetings to keep the said record open for public inspection;

(8) To issue certificates of qualification signed by the committee after the name of the person examined shall have been written therein, and not in blank, to such persons only as upon said examination answer intelligently and correctly at least twelve questions in the English language pertaining to the requirements of a practical miner, being properly identified under oath as a mine laborer by at least one practical miner holding a miner's certificate, and produce satisfactory evidence of having had not less than two years' practical experience as a miner or as a mine laborer in the anthracite mines of this Commonwealth, such certificates to be issued only at meetings of the committee and then and there signed in person by the entire committee;

(9) To report annually to the court of common pleas of the county and to the State Department of Mines, all moneys received and disbursed, together with the number of miners examined and registered and the number who failed to pass the required examinations;

And it is hereby expressly stated in this order of appointment that the same is conditional upon strict performance of every duty as above defined and revocable upon non-performance."

The new Board met and organized by electing Thomas Curtis, of Nanticoke, President, and Edward Doggett, of Freeland, Secretary, and it would seem that the members were very much interested in the performance of their duty, as evidenced by the following notice:

"MINERS' EXAMINING BOARD

First Inspection District of the Anthracite Coal Region of Pennsylvania, Comprising the County of Luzerne

The Miners' Examining Board appointed by the Courts of Luzerne County will meet on Saturday, February 5, and Monday and Tuesday, February 7 and 8, 1910, at 9 A. M., in the Court House, in the arbitration room, to examine such applicants as come before them for miners' certificates and for the purpose of registering such miners who hold certificates and have moved into the district.

Applicants for miners' certificates must present themselves in person and be able to answer satisfactorily twelve questions in English relating to practical mining and be vouched for by a qualified miner holding a certificate, who shall identify the applicant. Applicants must also produce satisfactory evidence of having had not less than two years' practical experience as a miner or laborer in the anthracite mines of the Commonwealth.

THOMAS CURTIS, President,
EDWARD DOGGETT, Secretary."

At the time the Act of 1897 became effective Luzerne county had three inspection districts,—the Third, with headquarters at Pittston; the Fourth, with headquarters at Wilkes-Barre; the Fifth, with headquarters at Hazleton; and was entitled to three Examining Boards of nine members each, according to section 2 of the act, which reads as follows: "There shall be established in each of the eight inspection districts * * a board to be styled the Miners' Examining Board * *, to consist of nine miners." The county is still entitled under this act to three Boards of nine members each, but for some unknown reason the court in making the appointments for 1910 appointed only one Board of nine members.

The members, however, were appointed from the districts as provided by law, Pittston, Wilkes-Barre and Hazleton. The court in its instructions directed the Board, in accordance with section 3, to designate convenient places within the district for the meeting of the several committees, preferably in Hazleton, Nanticoke, Wilkes-Barre and Pittston; and in accordance with section 5, to meet at each designated place once every month, not oftener, the meeting to be public and if necessary to cover whatever portion may be required of three days in succession; and in accordance with section 8, to issue certificates of qualification, properly prepared, to such persons as upon examination answered intelligently and correctly at least twelve questions in the English language pertaining to the requirements of a practical miner.

This Board is composed of men who are reputed to be honorable and upright citizens selected from among the most skillful miners in the county and it is believed that they were anxious to comply with the provisions of the act in conducting the examinations, but they made a most serious blunder at the outset by holding three examinations (by all the three sub-committees) at Wilkes-Barre at one time and also at other mining towns in the same way, and for longer periods than three days, instead of the sub-committees meeting, one each, at Hazleton, Wilkes-Barre and Pittston, as contemplated by the act. Who led them into this mistake the Department does not know. The Department is of the opinion that the members of the sub-committee from Hazleton had no authority to examine applicants for

certificates in Wilkes-Barre or elsewhere outside of their own district, and the same may be said of the sub-committees from Wilkes-Barre and Pittston, and the action of the Board in this respect has therefore been illegal, the certificates they granted are invalid and no doubt would be so declared by the court if the matter should ever reach that tribunal.

When the Board held its first sessions it seemed to be filled with a determination to live up to the requirements of the law, and certificates were refused to all persons not qualified to receive them; but in less than a week, owing to the loudly expressed dissatisfaction of the non-English speaking miners, they grew less conservative and began to issue certificates to all applicants who had been employed as miners for two years or more and could articulate a few words of English. It is not the intention of the Department to find fault with this action of the Board, and yet, while it is true that the law is unjustly severe, the Board had no right to issue certificates to ignorant and incompetent persons. The advice of the Department to the Board was not to interfere with persons who had received certificates prior to 1910, as they were not responsible for what had been done by previous Boards and had no power to nullify their work, but to be careful in future to issue no certificates to persons not qualified to receive them.

The only legal or satisfactory way to get at the root of this evil would be to have all the certificates issued since 1890 recalled and the holders subjected to an examination according to law. Such a method, however, would be impossible, but even if it were possible, it would be impracticable and unfair for the reason that between 50 and 60 per cent. of the holders of certificates would be found to be unqualified by reason of their lack of English and would of necessity be debarred from the mines. Such action would also result in serious interference with the operation of the mines; in fact, they could not work more than one-half of the time owing to the lack of employes. A measure so drastic would rightly be looked upon with disfavor.

It may be said in this connection that a great many of the non-English speaking miners are now known to be among the most expert workers in the anthracite region, and it should also be borne in mind that coal must be produced for public use, and if the supply of English speaking miners is not sufficient for the purpose, miners who are unable to speak English must of necessity be employed.

If the Examining Boards had only been honest in their work during the past twenty years and had enforced the two years' experience test and the language test, the foreigners who are still unable to speak the English language would no doubt have made a determined effort to overcome their deficiency in this respect, and in so doing would have rendered impossible the present disgraceful state of affairs.

In view of all the circumstances to be considered it would seem that the present holders of certificates must be permitted to retain them, and the reform in this matter must date from the present time. It will not be a great many years before the unqualified workers of today will be eliminated either by removal or by death, or will have acquired sufficient English to measure up to the required standard, and, if

none but legal certificates are issued from this time on, the menace that has for so many years hung over the anthracite workers by reason of the inefficiency of certain employes will then be removed.

It is only proper to state in this connection that the act of 1897 contains some oppressive features. In the first place, it has worked great injustice to capable miners from some of the foreign countries in demanding that they shall labor with a miner for at least two years before they can take an examination for a certificate of qualification. The result of this requirement has been to keep the English, Welsh, Scotch and Irish away from the anthracite mines. They either stay at home or go elsewhere where they can be employed as miners without being subjected to a period of service at the menial work of a miner's laborer. The act also prohibits the employment in anthracite mines of miners from the bituminous mines of this State and from the bituminous mines of other states, regardless of whether they are competent or not.

It is the opinion of the Department that this act should be repealed. If it is not repealed, it should be amended to apply to the gaseous mines only of both the anthracite and bituminous regions. It is an indisputable fact that the gaseous mines of the bituminous region are just as dangerous as those of the anthracite region and therefore should be subject to the same legal control and supervision. It should also provide that the employes in the two regions could work in either region, and that miners from other states could be employed in either region.

The act should also provide that the names of all miners in service at the time the act becomes effective shall be sent by the superintendents to the inspectors of the various districts, who shall forward the names to the Department of mines, and certificates of service shall be issued by the Department to the persons entitled to receive them.

Every applicant for a certificate of qualification should be compelled to produce satisfactory evidence of having worked at least two years in the coal mines of this country or of other countries, and be able to understand the English language sufficiently to read the mine law or at least the printed rules, and understand the instructions of the foreman or other person in charge, so that he would be able to guard himself against accidents from falls of roof or coal or other dangers.

It should also provide for a Board of three members in each inspection district, and the inspector of the district should be an ex-officio member. The Boards should be required to send to the Department of Mines all papers pertaining to the examination, including the answers of the applicants and the printed questions and answers as prepared by the Boards. The Department of Mines should then issue certificates to the successful candidates, properly attested by the Department seal. The report of the successful applicants as sent in by each Board should be signed by all the members of the Board while in session and countersigned by the inspector.

As suggested in previous annual reports of the Department, the Boards should be paid by the State, each member to receive five dollars a day for the time spent in conducting the examinations, and his necessary expenses, and all fees received from the applicants should be sent to the Department of Mines, to be transmitted to the State

Treasurer less the cost of issuing certificates. If some such method as this were adopted there would be no inducement for the Boards to pass unqualified applicants, and the State would to a great degree be relieved of the odium that has for many years rested upon it in connection with the matter of miners' certificates.

It has been pretty well demonstrated that the miners' certificate law, the intent of which was to provide qualified workmen, has failed in its purpose.

MINE FOREMEN'S EXAMINING BOARDS

One of the most important officials in the anthracite coal mines is the mine foreman. The welfare of the mining interests depends largely upon the vigilance, care and efficiency of these officials, and when they are incompetent they are a menace to the lives of the miners and the property of the operators. The mine foreman should be qualified for his position, not only by practical experience at mining coal, but by experience in the other branches pertaining to mining operations. He should also be a man of good character and of necessity he must possess a high average of intelligence in order to pass the examination required of him by law—an examination that is or ought to be as stringent as a Governmental Civil Service examination. The mine foreman, it may be stated, is the only mine official of whom the law demands proof of qualification to perform the duties of his position; and in view of the responsibility that attaches to his position it is to be regretted that the Examining Boards are not more careful in passing upon the candidates for this office. The inspectors, who are ex-officio members of the Boards, should be able in a great measure to prevent the passing of incompetent men, but owing to the fact that the office of inspector is an elective one and consequently at the mercy of certain political elements, they no doubt are to a certain extent influenced in the performance of their duty. The Boards are largely controlled by the miners who, it is feared, may frequently have undue influence over the action of the inspectors. The inspector very naturally feels that to oppose the members of the Board who favor the passing of incompetent friends is to incur their displeasure and enmity, which may take active form in opposing his re-election to the office. This baleful political influence is no doubt responsible for many of the incompetent mine foremen in the anthracite region, and it is doubtful if any improvement can be expected in this respect until the office of inspector is lifted out of politics to the extent that it is made an appointive office to be filled by the Governor, who shall select such persons as have attained the highest percentages in an examination conducted by a competent and reputable Examining Board. This is the method in vogue in the bituminous region and eliminates to a great extent the disadvantages and dangers that attend the elective method by which the anthracite inspectors are chosen.

One of the evidences of the favoritism that may be shown by the members of an Examining Board is seen in the fact that applicants will frequently leave their own districts and go into other districts to

be examined, presumably before a Board that will for certain reasons be more favorable to them. Many instances of this kind have come to the notice of the Department in recent years.

In view of the improbability of a change in the method of creating mine inspectors, the Department had prepared for submission to the last Legislature a bill looking to a reform in the matter of conducting the examination of candidates for the office of mine foreman. The bill, however, failed of passage. Among other things it provided for the annual appointment by the Governor of members of the Boards consisting of miners and operators, managers or superintendents, and two mine inspectors on each Board to act ex-officio. The bill also reduced the number of Examining Boards from twenty to ten, and by placing two inspectors on each Board it was thought that the evil complained of might be reduced to a minimum. It also gave the Chief of the Department of Mines power to "designate the members who shall constitute the different Boards and to name the places where the Boards shall hold the examinations."

The Boards were to organize by electing one of the inspectors chairman and the other secretary, and the members were to subscribe to the following oath before an officer authorized to administer the same, namely:

"We, the undersigned, do solemnly swear (or affirm) that we will perform the duties of examiners of applicants for certificates of qualification as mine foremen, assistant mine foremen and fire bosses; that we will not divulge or make known to any person any question prepared for an examination or in any manner assist any applicant to pass the examination, but will be governed by the evidence of the qualifications of applicants to fill said positions and not by any consideration of personal favor; and that we will certify all whom we may find qualified in accordance with this act and none other."

Work of the Mine Inspectors

The work of the Inspectors has been very satisfactory during the year. They have made every effort to secure strict compliance with the mining laws and the result has been such as to commend their work to the Chief of the Department.

During the year they spent 2,952 days inspecting mines; 120 days inspecting breakers and machinery; 464 days investigating accidents; 104 days attending inquests; 1,192 days at office work; 27 days inspecting maps and plans; 487 days in consultation on mining matters; 22 days in consultation on legal matters; 124 days travelling on duty; 194 days on sick list; 129 days legal holidays; 115 days attending court; 36 days attending funerals; 60 days at mine fires; 8 days attending Mine Inspectors' examinations; 106 days on Mine Foremen Examining Boards; 72 days on vacation; 30 days on private business; 16 days sickness in families; 9 days absent on account of deaths in families; a total of 6,268 days or about 316 days a year for each Inspector.

ACCIDENT TABLES

TABLE 1.—Number of minor children killed inside and outside the mines, 1909

Districts	Inside						Outside								Grand totals inside and outside
	Boys 20 years	Boys 19 years	Boys 18 years	Boys 17 years	Boys 16 years	Totals	Boys 20 years	Boys 19 years	Boys 18 years	Boys 17 years	Boys 16 years	Boys 15 years	Boys 14 years	Totals	
First,		1		2		3							1	1	4
Second,	1		2			3									3
Third,	1		3	1		5			1					1	6
Fourth,	3	2	1			6					1			1	7
Fifth,															
Sixth,	1	2		1	1	5		1						1	6
Seventh,		1	2	1		4		1						1	5
Eighth,		3	2		1	6	1						1	2	8
Ninth,		1		1	1	3		1						1	4
Tenth,	1	1		1	1	4				1		1		2	6
Eleventh,	1				1	2	2	2				1		5	7
Twelfth,								1						1	1
Thirteenth,	1	1		1		3		1			1			2	5
Fourteenth,															
Fifteenth,		2	1	1		4	1							1	5
Sixteenth,		1				1				1	1			2	3
Seventeenth,				1		1		1		2				3	4
Eighteenth,															
Nineteenth,															
Twentieth,		1				1				1				1	2
Totals,	9	16	11	10	5	51	4	8	1	5	3	2	2	25	76

Note: The above table shows that no minor children under the age of 14 years were killed outside the mines and only 2 between the ages of 14 and 15 years. Also that no minor children under the age of 16 years were killed inside the mines, which may be taken as practical evidence that the employment age law is being strictly carried out. 25 minors between the ages of 14 and 20 years lost their lives outside, and 51 minors between the ages of 16 and 20 years lost their lives inside the mines. The total number of accidents among the minors between 14 and 20 years was 76 or 15.51 per cent. of the total number of fatal accidents inside and outside the mines.

TABLE 2.—Number and causes of fatal accidents inside the mines; production, employes, lives lost per 1,000 employed; production per life lost, lives lost per 1,000,000 tons produced, 1909.

Counties	Fatal Accidents Inside					Production	Employes inside	Lives lost inside per 1,000 employed	Tons of coal produced per life lost inside	Lives lost inside per 1,000,000 tons produced
	By falls	By cars	By explosions of gas	By miscellaneous causes	Total					
Luzerne,	112	29	16	45	202	27,671,702	45,121	4.48	136,989	7.30
Lackawanna,	73	22	1	33	129	18,293,939	33,809	3.82	141,814	7.05
Schuylkill,	35	11	7	35	88	14,995,176	25,749	3.42	170,400	5.87
Northumberland,	25	7	3	11	46	5,346,281	10,361	4.44	116,224	8.60
Totals,	245	69	27	124	465	66,307,098	115,040	4.04	142,596	7.01
Carbon,	3	2	1	10	16	2,368,747	3,492	4.58	148,047	6.75
Columbia,	1			1	2	975,985	1,568	1.28	487,993	2.05
Dauphin,	1			1	2	832,494	1,419	1.41	416,247	2.40
Susquehanna,	2			1	3	526,639	953	3.15	175,546	5.70
Sullivan,	2				2	572,514	661	3.03	286,257	3.49
Wayne,						44,945	139			
Totals,	9	2	1	13	25	5,321,324	8,232	3.04	212,853	4.70
Grand totals,	254	71	28	137	490	71,628,422	123,272	3.97	146,180	6.84

Note: The above table shows that in the first group of counties 245, or 52.69 per cent., of the fatal accidents inside the mines were caused by falls; 69, or 14.84 per cent., by cars; 27, or 5.81 per cent., by explosions of gas, and 124, or 26.66 per cent., by other causes. In the second group 9, or 36 per cent., were killed by falls; 2, or 8 per cent., by cars; 1, or 4 per cent., by explosions of gas, and 13, or 52 per cent., by other causes. Luzerne county lost 112, or 55.44 per cent. by falls; 29, or 14.36 per cent., by cars; 16, or 7.92 per cent., by explosions of gas, and 45, or 22.28 per cent., by other causes. Lackawanna county lost 73, or 56.59 per cent., by falls; 22, or 17.05 per cent., by cars; 1. or .78 per cent., by explosions of gas, and 33, or 25.58 per cent., by other causes. Schuylkill county lost 35, or 39.78 per cent., by falls; 11, or 12.50 per cent., by cars; 7, or 7.94 per cent., by explosions of gas, and 35, or 39.78 per cent., by other causes. Northumberland county lost 25, or 54.35 per cent., by falls; 7, or 15.22 per cent., by cars; 3, or 6.52 per cent., by explosions of gas, and 11, or 23.91 per cent., by other causes. Carbon county lost 3, or 18.75 per cent., by falls; 2, or 12.50 per cent., by cars; 1, or 6.25 per cent., by explosions of gas, and 10, or 62.50 per cent., by other causes. Columbia county lost 1, or 50 per cent., by falls, and 1, or 50 per cent., by other causes. Dauphin county lost 1, or 50 per cent., by falls, and 1, or 50 per cent., by other causes. Susquehanna county lost 2, or 66.67 per cent., by falls, and 1, or 33.33 per cent., by other causes. Sullivan county lost 2, or 100 per cent., by falls.

TABLES 3 AND 4—NATIONALITY OF EMPLOYES KILLED BY FALLS, 1909

Information received from 98 per cent. of the operators shows that 40 per cent. of the employes are of the English-speaking races and 60 per cent. of the non-English-speaking races. Of the outside employes, 60 per cent. are of the former and 40 per cent. of the latter. Table 3 shows that 73.62 per cent. of those killed by falls are non-English-speaking employes, and 26.38 per cent. are English-speaking employes, including American, English, Welsh, Scotch, Irish and German. The figures show that a larger percentage of non-English-speaking employes were killed by falls than their number would warrant. If the

accidents by falls among these people had been in proportion to the number of employes, only 152 persons would have been killed instead of 187. If the accidents by falls among the English-speaking people had been in proportion to the number of employes, about 102 would have been killed instead of 67. The accidents from other causes inside the mines are in about the same proportion.

Table 4 shows that of the 187 foreigners killed by falls: 147 or 78.61 per cent., were killed at or near the face of the workings; 24, or 12.83 per cent., while removing pillars, and 16, or 8.56 per cent., on the roads. Of the 67 employes classed as Americans killed by falls: 50, or 74.63 per cent. were killed at or near the face of the workings; 7, or 10.45 per cent., while removing pillars, and 10, or 14.92 per cent., on the roads. The total number killed by falls was 254, of which 197, or 77.56 per cent., were killed at or near the face of the workings; 31, or 12.20 per cent., while removing pillars, and 26, or 10.24 per cent., on the roads.

Table 3.—Nationality by birth of employes killed by falls,1909

Nationality	Districts																					Totals	Percentages
	First	Second	Third	Fourth	Fifth	Sixth	Seventh	Eighth	Ninth	Tenth	Eleventh	Twelfth	Thirteenth	Fourteenth	Fifteenth	Sixteenth	Seventeenth	Eighteenth	Nineteenth	Twentieth			
American	2	4	1	2	2	3	1	2	3	1			1		1	4		1	1	3		32	
English		1		1		1		1	1		1				2							8	
Welsh		1					1		2						1		1					6	26.38
Scotch																							
Irish		1	4	1		2		1	1	1	1			1	2							15	
German		1				1		1	1	1					1							6	
Polish	3	5	3	4	9	6	10	6	6	5	7	2	2	1	5	6		1	2			83	
Hungarian			3														1					4	
Italian	2				2	5		1		2		1		1	1							15	
Slavonian		2	4			1		4	3		1		1				2	1				19	
Lithuanian		1	4	1		2	4	6		4		2	3					6	1	1		35	73.62
Austrian			2		1	1		1	1							1		1	1			9	
Russian	1	6	2			3	2	1	3		1		1									20	
Swedish				1																		1	
Tyrolean															1							1	
Totals	8	22	23	10	14	25	18	24	21	14	11	5	8	3	14	11	4	10	5	4		254	100.00

TABLE 4.—Nationality by birth of employes killed by falls, 1909

Districts	Foreigners				Americans*				Grand totals
	By falls at or near face	By falls while taking out pillars	By falls on gangways going to or from work	Totals	By falls at or near face	By falls while taking out pillars	By falls on gangways going to or from work	Totals	
First,	5	1	------	6	1	1	------	2	8
Second,	14	------	------	14	8	------	------	8	22
Third,	13	4	1	18	5	------	------	5	23
Fourth,	6	------	------	6	3	------	1	4	10
Fifth,	6	5	1	12	1	1	------	2	14
Sixth,	12	5	1	18	5	1	1	7	25
Seventh,	16	------	------	16	------	------	2	2	18
Eighth,	18	------	1	19	3	------	2	5	24
Ninth,	8	2	3	13	8	------	------	8	21
Tenth,	11	------	------	11	2	------	1	3	14
Eleventh,	4	2	3	9	1	------	1	2	11
Twelfth,	4	------	1	5	------	------	------	------	5
Thirteenth,	5	1	1	7	------	------	1	1	8
Fourteenth,	1	------	1	2	1	------	------	1	3
Fifteenth,	6	------	1	7	7	------	------	7	14
Sixteenth,	4	2	1	7	1	2	1	4	11
Seventeenth,	3	------	------	3	1	------	------	1	4
Eighteenth,	6	2	1	9	1	------	------	1	10
Nineteenth,	4	------	------	4	1	------	------	1	5
Twentieth,	1	------	------	1	1	2	------	3	4
Totals,	147	24	16	187	50	7	10	67	254

*English-speaking employes, including Americans, English, Scotch, Irish, Welsh and Germans.

Table 5.—Number and causes of fatal accidents inside the mines, by districts, 1909 .

Districts	Names of Counties or Parts of Counties in Each District	By falls	Percentages by falls	By cars	Percentages by cars	By explosions of gas	Percentages by explosions of gas	By electricity	Percentages by electricity	By miscellaneous causes	Percentages by miscellaneous causes	Totals
First,	Lackawanna, Susquehanna, Wayne,	8	53.33	3	20.00					4	26.67	15
Second,	Lackawanna,	22	64.70	3	8.82	1	2.94			8	23.54	34
Third,	Lackawanna,	23	52.28	6	13.63			1	2.27	14	31.82	44
Fourth,	Lackawanna,	10	41.67	7	29.17			2	8.33	5	20.83	24
Fifth,	Lackawanna, Luzerne, Sullivan,	14	77.78	3	16.67					1	5.55	18
Sixth,	Luzerne,	25	54.35	4	8.69	8	17.39			9	19.57	46
Seventh,	Luzerne,	18	50.00	9	25.00	1	2.78			8	22.22	36
Eighth,	Lackawanna, Luzerne,	24	68.57	5	14.29	1	2.86			5	14.28	35
Ninth,	Luzerne,	21	75.00	2	7.14	4	14.29			1	3.57	28
Tenth,	Luzerne,	14	38.89	5	13.89	2	5.55			15	41.67	36
Eleventh,	Carbon, Luzerne,	11	50.00	4	18.19	1	4.54			6	27.27	22
Twelfth,	Schuylkill,	5	27.77	2	11.11	1	5.56			10	55.56	18
Thirteenth,	Schuylkill,	8	42.11	4	21.05	1	5.26			6	31.58	19
Fourteenth,	Columbia, Schuylkill,	3	37.50	1	12.50	1	12.50			3	37.50	8
Fifteenth,	Northumberland,	14	51.86	5	18.52	3	11.11			5	18.51	27
Sixteenth,	Northumberland,	11	57.89	2	10.53					6	31.58	19
Seventeenth,	Carbon, Luzerne,	4	17.40	3	13.04	2	8.70	3	13.04	11	47.82	23
Eighteenth,	Schuylkill,	10	50.00			1	5.00			9	45.00	20
Nineteenth,	Schuylkill,	5	62.50			1	12.50			2	25.00	8
Twentieth,	Dauphin, Schuylkill,	4	40.00	3	30.00					3	30.00	10
Totals and percentages,		254	51.84	71	14.49	28	5.71	6	1.22	131	26.74	490

Note: The above table shows that in the Sixth district 8 lives were lost by explosions of gas, 6 of which were lost in one explosion at No. 14 mine of the Pennsylvania Coal Company, March 2. This accident was due to the failure of the fire boss to carry out the provisions of the law. See remarks of the Inspector of the district. Of the 4 lives lost in the Ninth district, 2 were lost in the Nottingham mine, June 23, by the carelessness of the victims. See remarks of Inspector. Two lives were lost in the Tenth district, one by an explosion of gas at the Auchincloss mine, November 9, where 8 other lives were also lost by suffocation by smoke from the fire ignited by the explosion. See remarks of the Inspector. Three lives were lost by an explosion of gas in the Fifteenth district in three different explosions caused by the recklessness of the victims. See remarks of the Inspector. Two lives were lost by an explosion of gas in the Seventeenth district in different explosions by the carelessness of the victims in using naked lights instead of safety lamps as directed. The table also shows that 254 lives were lost by falls, 71 by cars, 28 by explosions of gas, and 6 by electricity, a total of 359, and 131 lives were lost through other causes. Falls caused 51.84 per cent. of all the accidents, and cars 14.49 per cent. Together falls and cars caused practically two-thirds of all the fatal accidents inside the mines. More than half of the accidents that occur inside the mines could be prevented if the persons directly interested would use ordinary precautions.

Table 6.—Number and causes of fatal accidents inside the mines; production, employes, lives lost per 1,000 employed, production per life lost; lives lost per 1,000,000 tons produced, 1899-1909

Years	Fatal Accidents Inside By										Total number of fatal accidents inside	Number of inside employes	Production in tons of 2,000 pounds	Lives lost inside per 1,000 employed	Tons of coal produced per life lost inside	Lives lost inside per 1,000,000 tons produced
	Falls		Cars		Explosions of Gas		Electricity		Miscellaneous Causes							
	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage						
1899,	226	58.10	51	13.11	28	7.20	.....	.....	84	21.59	389	92,167	60,518,331	4.22	155,574	6.43
1900,	175	48.88	60	16.76	38	10.62	.....	.....	85	23.74	358	94,140	57,363,396	3.80	160,233	6.24
1901,	226	51.25	69	15.65	33	7.48	.....	.....	113	25.62	441	98,434	67,094,665	4.48	152,142	6.57
1902,	116	47.35	42	17.14	20	8.16	.....	.....	67	27.35	245	98,377	41,340,935	2.49	168,739	5.93
1903,	210	49.30	70	16.43	26	6.10	1	.24	119	27.93	426	102,055	75,232,585	4.17	176,602	5.66
1904,	238	47.98	71	14.32	30	6.05	.....	.....	157	31.65	496	110,362	73,594,369	4.49	148,376	6.74
1905,	295	53.54	82	14.88	33	5.99	2	.36	139	25.23	551	116,371	78,647,020	4.73	142,735	7.01
1906,	214	46.93	67	14.69	43	9.43	.....	.....	132	28.95	456	114,998	72,139,510	3.97	158,201	6.32
1907,	279	46.42	88	14.64	44	7.32	3	.50	187	31.12	601	117,849	86,056,412	5.10	143,189	6.98
1908,	284	47.65	90	15.10	57	9.57	1	.17	164	27.51	596	124,233	83,543,243	4.80	140,173	7.13
1909,	254	51.84	71	14.49	28	5.71	6	1.22	131	26.74	490	123,272	80,223,833	3.98	163,722	6.11
Totals and percentages,	2,517	49.85	761	15.07	380	7.53	13	.26	1,378	27.29	5,049	1,192,258	775,754,299	4.23	153,645	6.51

Note: The above table shows that during the years 1899-1909 the number of fatalities by falls averaged 49.85 per cent. of the total number; by cars 15.07 per cent.; by explosions of gas 7.53 per cent.; an aggregate of 72.45 per cent. for these three causes. Accidents by falls and cars are abnormally high, but they can be reduced if the men directly interested—foremen, miners and drivers—will pay greater attention to the conditions of safety.

TABLE 7.—Number of mines in operation, production, number of inside employes, number of lives lost inside, production per life lost inside and number of lives lost inside per 1,000,000 tons produced, in each district, 1909.

Districts	Mines in operation	Production in tons of 2,000 pounds	Inside employes	Lives lost inside	Production per life lost inside	Lives lost per 1,000,000 tons produced
First,	54	3,784,292	6,554	15	252,286	3.96
Second,	31	1,674,256	9,163	34	137,478	7.27
Third,	24	4,954,543	8,130	44	112,603	8.88
Fourth,	32	4,352,530	6,547	24	189,689	5.27
Fifth,	31	4,369,554	5,932	18	242,753	4.12
Sixth,	35	5,059,698	7,653	46	109,993	9.09
Seventh,	43	5,869,703	8,030	36	163,047	6.13
Eighth,	24	4,134,675	6,834	35	118,134	8.46
Ninth,	31	6,152,478	8,024	28	219,731	4.55
Tenth,	39	4,305,257	7,109	36	119,590	8.36
Eleventh,	63	5,025,882	6,881	22	228,449	4.38
Twelfth,	15	2,993,217	4,948	18	166,290	6.01
Thirteenth,	34	3,097,707	5,114	19	163,037	6.13
Fourteenth,	26	2,530,474	3,551	8	316,309	3.16
Fifteenth,	31	3,161,763	5,550	27	117,102	8.54
Sixteenth,	36	2,826,071	4,811	19	148,741	6.72
Seventeenth,	36	4,372,421	5,319	23	190,105	5.26
Eighteenth,	39	2,881,063	4,460	20	144,053	6.94
Nineteenth,	49	3,035,527	4,814	8	379,441	2.64
Twentieth,	26	2,442,722	3,848	10	244,272	4.09
Totals and averages	699	80,223,833	123,272	490	163,722	6.11

TABLE 8.—Causes of fatal accidents inside the mines and production per accident, by counties, 1900-1909

Years	County	Number of mines	Number of inside employes	Production in tons of 2,000 pounds	Fatal accidents by falls	Fatal accidents by explosions of gas	Total fatal accidents inside	Production in tons per fatal accident inside	Lives lost per 1,000,000 tons produced
1900	Luzerne,	152	34,476	21,481,122	57	17	135	159,119	6.28
1901		148	36,019	23,963,869	95	22	182	131,670	7.59
1902		229	35,491	14,280,332	36	7	93	153,552	6.51
1903		233	38,370	26,797,659	75	15	169	158,566	6.30
1904		256	41,603	26,794,072	106	8	200	133,970	7.46
1905		254	43,109	28,209,791	122	14	215	131,208	7.62
1906		271	41,643	26,612,192	84	27	194	137,176	7.29
1907		243	42,022	30,853,087	105	19	223	138,355	7.23
1908		243	46,302	31,728,997	116	34	258	122,981	8.13
1909		241	45,121	30,992,306	112	16	202	153,427	6.52
			404,156	261,713,427	908	179	1,871	139,879	7.15

Years	County	Number of mines	Number of inside employes	Production in tons of 2,000 pounds	Fatal accidents by falls	Fatal accidents by explosions of gas	Total fatal accidents inside	Production in tons per fatal accident inside	Lives lost per 1,000,000 tons produced
1900	Lackawanna	83	23,907	13,755,961	55	8	89	154,561	6.47
1901		80	26,207	17,258,125	63	4	109	158,331	6.31
1902		118	25,931	9,647,425	23	.....	43	224,359	4.45
1903		114	27,755	18,457,647	59	3	107	172,501	5.80
1904		115	30,500	17,070,437	62	7	115	148,439	6.73
1905		126	30,853	17,917,376	82	2	127	141,082	7.09
1906		157	31,196	18,840,560	70	4	112	168,219	5.94
1907		155	32,444	22,433,408	87	16	174	128,928	7.75
1908		162	32,296	21,631,995	80	3	141	153,418	6.52
1909		157	33,764	20,489,212	73	1	129	158,831	6.29
		.....	294,853	177,502,146	654	48	1,146	154,888	6.46
1900	Schuylkill	82	19,952	12,998,899	32	11	82	158,523	6.31
1901		76	20,415	15,277,658	39	6	93	164,276	6.09
1902		76	20,876	7,886,235	37	3	60	131,437	7.61
1903		76	20,144	16,389,505	44	6	88	186,244	5.37
1904		106	22,272	15,738,763	43	8	107	147,091	6.80
1905		132	25,716	17,339,422	60	11	136	127,496	7.84
1906		153	25,365	16,376,538	32	7	94	174,218	5.74
1907		140	25,181	20,160,970	48	3	123	163,910	6.10
1908		179	26,625	18,196,714	54	17	121	150,386	6.65
1909		178	25,749	16,794,597	35	7	88	190,848	5.24
		.....	232,295	157,159,301	424	79	992	158,427	6.31
1900	Northumberland	27	9,741	4,690,944	15	1	33	142,150	7.03
1901		27	9,867	5,430,991	21	1	36	150,861	6.63
1902		28	9,670	3,124,259	10	10	34	91,890	10.88
1903		26	9,312	5,506,038	21	2	35	157,313	6.36
1904		52	9,248	5,359,028	15	6	39	137,411	7.28
1905		54	9,823	5,373,001	21	5	42	127,929	7.82
1906		70	9,585	5,367,497	17	3	32	167,734	5.96
1907		60	10,653	6,665,392	23	5	45	148,120	6.75
1908		68	10,639	6,067,741	23	3	49	123,831	8.08
1909		67	10,361	5,987,835	25	3	46	130,170	7.68
		.....	98,899	53,572,726	191	39	391	137,015	7.30
1900	Carbon	11	2,052	1,863,636	1	.....	3	621,212	1.61
1901		10	2,265	1,858,519	3	.....	10	185,852	5.38
1902		10	2,242	1,051,926	1	.....	4	262,982	3.80
1903		15	2,120	2,133,637	2	.....	13	164,125	6.09
1904		20	2,381	2,253,512	2	.....	7	321,930	2.11
1905		23	2,460	2,476,406	.....	.....	9	275,156	3.63
1906		23	2,740	2,246,823	2	1	6	374,470	2.67
1907		30	2,989	2,762,523	3	1	14	197,323	5.07
1908		22	3,531	2,784,946	4	.....	9	309,438	3.23
1909		28	3,492	2,652,997	3	1	16	165,812	6.03
		.....	26,372	22,084,925	21	3	91	242,691	4.12
1900	Columbia	7	1,163	980,720	3	.....	5	196,144	5.10
1901		5	714	1,209,859	2	.....	4	302,465	3.31
1902		6	1,438	230,870	.....	.....	3	76,957	12.99
1903		5	1,454	1,353,904	.....	.....	3	451,301	2.22
1904		10	1,419	1,151,624	7	.....	10	115,162	8.68
1905		9	1,567	1,229,697	2	.....	7	175,671	5.69
1906		7	1,403	969,065	3	1	7	138,438	7.22
1907		8	1,468	1,188,268	1	.....	4	297,067	3.37
1908		9	1,559	1,182,232	5	.....	5	236,465	4.22
1909		8	1,568	1,093,103	1	.....	2	546,551	1.83
		.....	13,753	10,589,436	21	1	50	211,789	4.72

Years	County	Number of mines	Number of inside employes	Production in tons of 2,000 pounds	Fatal accidents by falls	Fatal accidents by explosions of gas	Total fatal accidents inside	Production in tons per fatal accident inside	Lives lost per 1,000,000 tons produced
1900	Dauphin,	2	1,608	779,135	2	1	8	97,392	10.27
1901		2	1,562	830,572	3	------	7	118,653	8.43
1902		2	1,120	423,341	------	------	1	423,341	2.36
1903		2	1,256	732,969	3	------	5	146,594	6.82
1904		9	1,269	723,415	------	1	*11	65,765	15.21
1905		10	1,350	723,126	1	1	5	144,625	6.91
1906		10	1,422	734,723	3	------	3	244,908	4.08
1907		12	1,393	829,980	2	------	5	165,996	6.02
1908		12	1,481	848,005	1	------	9	94,223	10.61
1909		12	1,419	932,393	1	------	2	466,197	2.15
		------	13,880	7,557,659	16	3	56	134,958	7.41
1900	Susquehanna,	2	904	556,004	------	------	------	------	------
1901		2	1,104	743,105	------	------	------	------	------
1902		2	1,086	452,758	2	------	2	226,378	4.42
1903		2	1,064	800,773	4	------	6	133,462	7.49
1904		2	1,102	692,440	2	------	6	115,407	8.67
1905		2	1,026	680,146	6	------	6	113,358	8.82
1906		3	1,028	562,102	2	------	6	93,684	10.67
1907		3	970	644,088	9	------	12	53,674	18.63
1908		1	1,005	487,900	2	------	2	243,950	4.10
1909		2	953	589,836	2	------	3	196,612	5.09
		------	10,242	6,209,152	29	------	43	144,399	6.93
1900	Sullivan,	2	337	235,113	3	------	3	78,371	12.76
1901		2	281	152,505	------	------	------	------	------
1902		3	523	409,017	3	------	5	81,803	12.23
1903		3	455	293,442	2	------	2	146,721	6.82
1904		3	443	294,305	1	------	1	294,305	3.40
1905		4	331	310,496	1	------	2	155,248	6.44
1906		4	414	358,627	1	------	2	179,313	5.58
1907		4	459	433,101	1	------	1	433,101	2.31
1908		4	583	550,713	2	------	2	275,356	3.63
1909		4	661	641,216	2	------	2	320,608	3.12
		------	4,487	3,678,535	16	------	20	183,927	5.44
1900	Wayne,	1	11	21,862	------	------	------	------	------
1901		1	589	369,462	------	------	------	------	------
1902		------	------	------	------	------	------	------	------
1903		1	125	68,395	------	------	------	------	------
1904		1	125	76,353	------	------	------	------	------
1905		1	136	67,008	------	------	------	------	------
1906		3	202	71,381	------	------	------	------	------
1907		3	270	85,594	------	------	------	------	------
1908		2	212	63,906	------	------	------	------	------
1909		2	184	50,338	------	------	------	------	------
		------	1,854	874,299	------	------	------	------	------

*Williamstown disaster.

Note: The percentages of fatalities by falls and explosions of gas in the various counties during the past ten years were as follows: Luzerne, falls, 48.53, gas, 9.57; Lackawanna, falls, 57.07, gas, 4.18; Schuylkill, falls, 42.74, gas, 7.96; Northumberland, falls, 48.85, gas, 9.97; Carbon, falls, 23.67, gas, 3.29; Columbia, falls, 42, gas, 2; Dauphin, falls, 28.57, gas, 5.36; Susquehanna, falls, 67.44; Sullivan, falls, 80.

No fatalities occurred in Wayne county during the period named, although 800,000 tons of coal were produced, a remarkable record.

TABLE 9.—Number of miners and miners' laborers employed in the mines; number killed and ratio of each class killed per 1,000 employed; average number of days worked by breakers; average production per day worked by breakers; 1881 to 1909

Years	Number of miners employed	Number of miners killed	Number of miners killed per 1,000 employed	Number of miners' laborers employed	Number of miners' laborers killed	Number of miners' laborers killed per 1,000 employed	Average number of days worked by breaker	Average production per day worked by breakers, gross tons
1881,	22,809	114	4.99	16,726	70	4.19	221	138,181
1882,	22,843	135	5.91	15,229	56	3.68	218	143,584
1883,	25,319	136	5.37	16,879	67	3.97	232	145,272
1884,	27,100	132	4.87	19,606	81	4.13	192	169,590
1885,	28,305	160	5.65	20,128	86	4.27	204	167,331
1886,	25,970	131	5.04	17,068	68	3.98	196	177,437
1887,	29,558	102	3.45	17,548	57	3.25	208	180,981
1888,	34,547	169	4.89	21,952	87	3.96	218	191,002
1889,	30,504	194	6.36	19,368	79	4.08	197	197,837
1890,	28,936	146	5.05	18,620	95	5.10	210	191,268
1891,	30,552	180	5.89	19,590	119	6.07	213	208,339
1892,	30,779	180	5.84	22,110	111	5.02	202	226,428
1893,	32,881	195	5.93	22,853	108	4.73	202	233,562
1894,	33,357	218	6.54	23,942	91	3.80	175	260,035
1895,	34,553	179	5.18	24,638	115	4.67	187	271,909
1896,	37,003	204	5.51	26,530	134	5.09	170	282,790
1897,	36,932	210	5.69	27,277	99	3.63	151	310,310
1898,	36,377	176	4.84	24,060	124	5.15	151	312,220
1899,	36,421	199	5.46	23,946	114	4.75	179	301,867
1900,	36,832	184	4.99	24,613	95	3.86	176	291,007
1901,	37,804	224	5.92	26,265	122	4.64	195	307,210
1902,	36,392	114	3.13	25,443	62	2.44	*116	†318,203
1903,	36,823	204	5.49	27,533	110	4.00	211	318,350
1904,	39,848	233	5.85	31,217	145	4.64	213	308,494
1905,	42,078	308	7.32	31,967	148	4.63	208	337,599
1906,	41,801	226	5.41	29,652	133	4.48	206	312,671
1907,	43,035	309	7.18	29,984	136	4.54	227	338,485
1908,	44,340	313	7.05	32,853	154	4.68	211	353,517
1909,	44,675	264	5.91	32,232	126	3.91	205	349,407

*Strike during the year.

†Washeries worked during the strike. The time was not computed in the average days worked.

Note: The above table shows that in 1881, 22,809 miners and 16,726 miners' laborers were employed an average of 221 days and that 138,181 tons of coal were produced each day worked. In 1891, 30,552 miners and 19,590 miners' laborers were employed an average of 213 days and 208,339 tons were produced each day worked. The increase in the number of miners and miners' laborers was 26.83 per cent., while the increase in production per day was 50.77 per cent. In 1901, 37,804 miners and 26,265 miners' laborers were employed an average of 195 days and 307,210 tons were produced each day worked. The increase in the number of miners and miners' laborers was 27.77 per cent., while the increase in the production per day was 47.45 per cent. During 1909, 44,675 miners and 32,232 miners' laborers were employed an average of 205 days and the production per day was 349,407 tons. The increase in the number of miners and miners' laborers over 1901 is 20.04 per cent., while the increase in the production per day is only 13.73 per cent. The number of miners and miners' laborers in 1891 was 50,142, in 1909 the number was 76,907, an increase of 53.37 per cent., while the increase in production of coal per day was 67.71 per cent.

TABLE 10.—Number of employes inside and outside the mines, number of fatal accidents per 1,000 employes, number of tons of coal mined per fatal accident, 1881-1909

Years	Inside				Outside			Number of lives lost inside and outside per 1,000 employes
	Employes	Fatal accidents	Lives lost per 1,000 employed	Production of coal in tons of 2,000 pounds for each life lost	Employes	Fatal accidents	Lives lost per 1,000 employed	
1881,	45,619	234	5.13	146,165	30,412	39	1.28	3.59
1882,	50,764	254	4.92	140,230	31,436	41	1.30	3.54
1883,	56,268	274	4.87	137,764	35,153	49	1.39	3.53
1884,	61,922	286	4.62	127,513	39,151	46	1.17	3.28
1885,	62,901	290	4.61	131,834	37,419	42	1.12	3.31
1886,	63,930	236	3.69	165,046	39,114	43	1.10	2.71
1887,	67,716	270	3.99	156,153	38,801	46	1.19	2.97
1888,	78,088	317	4.03	147,114	43,530	47	1.08	2.98
1889,	74,178	339	4.57	128,763	45,486	58	1.28	3.32
1890,	73,613	323	4.39	139,276	46,306	55	1.19	3.15
1891,	76,569	372	4.86	133,606	46,339	56	1.20	3.47
1892,	82,088	361	4.40	141,903	48,212	57	1.18	3.21
1893,	86,387	388	4.49	136,188	51,682	68	1.32	3.30
1894,	87,901	368	4.19	138,497	52,038	78	1.50	3.19
1895,	89,251	354	3.97	160,872	54,454	67	1.23	2.93
1896,	94,798	430	4.54	125,217	55,290	72	1.30	3.34
1897,	95,812	372	3.88	141,347	53,745	51	.95	2.83
1898,	91,171	360	3.95	146,674	51,249	51	.99	2.89
1899,	92,167	389	4.22	155,574	48,437	72	1.49	3.28
1900,	94,140	358	3.80	160,233	49,684	53	1.07	2.86
1901,	98,434	441	4.48	152,142	49,217	72	1.46	3.47
1902,	98,377	245	*2.49	168,739	49,762	55	1.11	2.03
1903,	102,055	426	4.17	176,602	49,772	92	1.85	3.41
1904,	110,362	496	4.49	148,376	50,968	99	1.94	3.69
1905,	116,371	551	4.73	142,735	51,883	93	1.79	3.83
1906,	114,998	456	3.97	141,250	51,177	101	1.98	3.35
1907,	117,849	601	5.10	143,189	50,925	107	2.10	4.20
1908,	124,233	596	4.79	140,173	50,270	82	1.63	3.88
1909,	123,272	490	3.98	163,722	47,923	77	1.61	3.31

*Year of the big strike, when an average of only 116 days was worked by the collieries.

Note: The above table shows that the 34,202,558 net tons of coal produced in 1881 were produced by 45,619 inside employes, which is equivalent to a production of 749 tons per employe. The miners and miners' laborers produce the coal, and as 39,535 miners and miners' laborers were employed during 1881, the average production by each of these employes was 865 tons. The production in 1909 was 80,223,833 net tons, produced by 123,272 inside employes, which is equivalent to the production of 651 tons per each employe. The number of miners and miners' laborers was 76,907, producing an average of 1,043 tons. The increase in miners and miners' laborers in 1909 over 1881 is 37,372 or 94.52 per cent., while the increase in the other inside employes was 40,281 or about 662.08 per cent., showing that the increase in inside employes, other than miners and miners' laborers, is more than 7 times as great as the increase in miners and miners' laborers. This great increase of employes who are not producers of coal is one of the important items that figure in the increased cost of coal production in the anthracite region.

Table 11.—Comparison of production and fatal accidents inside, 1908-1909

Names of Companies	1908				1909			
	Production in tons of 2,000 pounds	Number of fatal accidents inside	Production per fatal accident inside	Fatal accidents per 1,000,000 tons produced	Production in tons of 2,000 pounds	Number of fatal accidents inside	Production per fatal accident inside	Fatal accidents per 1,000,000 tons produced
Philadelphia and Reading Coal and Iron Co.,	11,929,856	80	149,123	6.71	11,256,043	66	170,546	5.86
Delaware, Lackawanna and Western Railroad Co.,	9,720,357	61	159,350	6.28	9,426,954	59	159,779	6.26
Lehigh Valley Coal Co.,	6,588,745	58	113,599	8.80	6,255,528	37	169,068	5.91
Delaware and Hudson Co.,	7,446,775	36	206,855	4.83	6,117,629	25	244,705	4.09
Pennsylvania Coal Co.,	5,168,193	38	136,005	7.35	5,413,452	46	117,684	8.50
Lehigh and Wilkes-Barre Coal Co.,	5,292,486	29	182,499	5.48	4,776,283	29	164,699	6.07
Lehigh Coal and Navigation Co.,	3,397,421	12	283,118	3.53	3,370,889	20	168,544	5.93
Scranton Coal Co.,	2,786,801	23	121,165	8.25	2,628,614	24	109,526	9.13
Kingston Coal Co.,	2,202,256	13	169,404	5.90	2,281,692	15	152,113	6.57
Temple Iron Co.,	986,942	20	49,347	20.26	*1,967,740	15	131,183	7.62
Mineral Railroad and Mining Co.,	593,634	8	74,204	13.48	1,770,194	24	73,758	13.56
Susquehanna Coal Co.,	3,325,048	41	81,099	12.33	1,745,593	13	134,276	7.45
Hillside Coal and Iron Co.,	1,539,856	10	153,986	6.49	1,483,103	8	185,388	5.39
Hudson Coal Co.,	796,796	7	113,828	8.78	1,410,354	8	176,294	5.67
G. B. Markle and Co.,	1,155,325	9	128,367	7.79	1,256,820	8	157,102	6.37
Coxe Brothers and Co., Incorporated,	1,479,828	9	164,425	6.08	1,154,275	5	230,855	4.33
Summit Branch Mining Co.,	848,005	9	94,228	10.61	932,393	2	466,197	2.15
Jermyn and Co.,	648,244	7	92,606	10.80	854,701	6	142,450	7.02
Price Pancoast Coal Co.,	730,872	7	104,410	9.58	785,267	6	130,878	7.64
West End Coal Co.,	808,861	8	101,107	9.89	696,571	5	139,314	7.18
Mill Creek Coal Co.,	739,700	8	92,463	10.82	648,645	5	129,729	7.71
A. Pardee and Co.,	562,635	4	140,669	7.11	613,467	2	306,734	6.52
Pardee Brothers and Co.,	552,263	3	184,088	5.43	589,366	3	193,455	5.17

*Increase in production due to the Temple Iron Co. operating the mines of the Sterrick Creek Coal Co. and Lackawanna Coal Co.

St. Clair Coal Co.,	552,496	3	184,165	5.43	477,780	1	477,780	2.09
Parrish Coal Co.,	531,189	1	531,189	1.88	451,012	3	150,337	6.65
Plymouth Coal Co.,	414,867	8	51,858	19.28	403,530	4	100,883	9.91
Thomas Colliery Co.,	385,973	6	64,329	15.54	382,576	1	382,576	2.61
Estate A. S. Van Wickle,	356,875	1	356,875	2.80	308,012	2	184,006	5.43
Midvalley Coal Co.,	385,805	3	128,602	7.78	359,482	1	359,482	2.78
Lytle Coal Co.,	423,554	2	211,777	4.72	356,122	2	178,061	5.62
Connell Anthracite Mining Co.,	284,607	2	142,304	7.03	351,925	†		
Elliott McClure and Co.,	302,897	2	151,449	6.60	336,984	1	336,984	2.96
Lentz Coal Co.,	344,380	3	111,460	8.97	304,499	†		
Pine Hill Coal Co.,	307,494	3	102,498	9.76	294,643	1	294,643	3.39
Excelsior Coal Co.,	266,772	1	266,772	3.75	282,197	†		
Harwood Coal Co.,	279,381	2	139,641	7.16	274,859	1	274,859	3.64
Oak Hill Coal Co.,	290,282	1	290,282	3.44	270,717	†		
Greenough Red Ash Coal Co.,	233,364	1	233,364	4.29	262,025	†		
Dodson Coal Co.,	219,240	2	109,620	9.12	253,015	1	253,015	3.95
C. M. Dodson and Co.,	312,356	3	104,119	9.60	251,944	2	125,972	7.94
Red Ash Coal Co.,	211,725	†			251,934	1	251,934	3.97
Upper Lehigh Coal Co.,	280,588	1	280,588	3.56	226,252	†		
Colonial Collieries Co.,	128,243	†			224,934	3	74,978	13.34
Truman M. Dodson Coal Co.,	169,679	2	84,840	11.79	220,252	1	220,252	4.54
Northwest Coal Co.,	176,807	4	44,202	22.62	213,580	1	213,580	4.68
East Boston Coal Co.,	159,106	†			213,200	2	106,600	9.38
Buck Run Coal Co.,	184,247	3	61,416	16.26	196,847	1	196,847	5.08
Dolph Coal Co.,	234,958	1	234,958	4.26	193,322	†		
People's Coal Co.,	220,457	5	44,090	22.68	192,526	5	38,505	25.97
Mt. Jessup Coal Co.,	165,352	1	165,352	6.05	188,626	1	188,626	5.30
Hazle Mountain Coal Co.,	172,795	1	172,795	5.79	183,401	†		
Stevens Coal Co.,	197,861	2	98,931	5.05	181,544	1	181,544	5.51
Shipman Koal Co.,	101,322	1	101,322	9.87	175,803	2	87,902	11.38
Northern Anthracite Coal Co.,	154,190	†			174,298	2	87,149	11.47
John S. Wentz and Co.,	150,536	1	150,536	6.64	157,343	1	157,343	6.36
Moosic Mountain Coal Co.,	142,588	1	142,588	7.01	150,382	1	150,382	6.65
Enterprise Coal Co.,	225,026	†			135,996	1	135,996	7.35
Green Ridge Coal Co.,	132,545	2	66,273	15.09	133,404	†		
Raub Coal Co.,	134,966	†			116,922	1	116,922	8.55
A. D. and F. M. Spencer Coal Co.,	92,782	†			114,001	1	114,001	8.77
M. S. Kemmerer and Co.,	115,688	1	115,688	8.64	106,702	†		
Girard Mammoth Coal Co.,	173,556	2	86,778	11.52	102,545	†		
Clear Spring Coal Co.,	271,345	5	54,269	18.43	96,361	2	48,181	20.76
George F. Lee Coal Co.,	66,949	1	66,949	14.94	82,803	†		
North End Coal Co.,	86,752	1	86,752	11.53	79,477	†		
Brookwood Coal Co.,	63,596	†			75,994	1	75,994	13.16
Phillips Coal Co.,	46,525	1	46,525	21.49	57,425	†		
East Lehigh Coal Co.,	69,337	1	69,337	14.42	50,851	†		
Reliance Coal Co.,	16,028	†			44,466	3	14,822	67.47
Nay Aug Coal Co.,	39,749	1	39,749	25.16	42,530	1	42,530	23.51
Carbondale Coal Co.,	24,888	†			32,757	1	32,757	30.52

†No accidents.

TABLE 11.—Continued.

Names of Companies	1908				1909			
	Production in tons of 2,000 pounds	Number of fatal accidents inside	Production per fatal accident inside	Fatal accidents per 1,000,000 tons produced	Production in tons of 2,000 pounds	Number of fatal accidents inside	Production per fatal accident inside	Fatal accidents per 1,000,000 tons produced
Port Carbon Coal Co..	30,262	†			31,715	2	15,858	63.06
Bull's Head Coal Co..	23,751	1	23,751	42.10	26,059	2	13,030	76.74
Austin Coal Co..	43,314	†			20,646	1	20,646	48.43
Archbald Coal Co.,	4,400	1	4,400	227.27	14,366	†		
Spring Hill Coal Co.,	6,123	†			6,354	1	6,354	157.38

†No accidents.

Note: The average production of coal per life lost during 1909 was 141,488 tons and the average loss of life per million tons produced was 7.07. This is the most favorable showing since 1904, when 145,237 tons were produced per life lost, an average of 6.89 lives lost for every million tons produced. The companies that produced an average of 150,000 tons per life lost during 1908 and 1909 are to be commended for their careful operation. It is suggested that each company take note of its own record as given in this table and those that make an unfavorable showing should endeavor to reduce the fatalities in future. The loss of life should not exceed one for every 200,000 tons produced.

TABLE 12.—Companies that had no fatal accidents in 1908 or 1909

Names of Companies	1908 Production in tons of 2,000 pounds	1909 Production in tons of 2,000 pounds
Alden Coal Co.,	365,822	310,583
Beddall Brothers and Co.,	137,761	233,647
Maryd Coal Co.,	108,778	232,260
W. R. McTurk Coal Co.,	148,702	152,332
Buck Ridge Coal Co.,	48,568	143,072
O'Boyle-Foy Anthracite Coal Co.,	106,833	104,938
Big Creek Coal Co.,	46,467	101,283
Mt. Hope Coal Co.,	105,348	93,483
Pittston Coal Co.,	70,643	91,946
Traders Coal Co.,	134,370	87,685
Trevorton Colliery Co.,	314	67,422
Darkwater Coal Co.,	*	65,575
Morss Hill Coal Co.,	66,006	46,892
Gerber and Seaman,	58,584	46,782
Carney and Brown,	54,708	45,173
John H. Davis Coal Co.,	36,191	32,651
Cambridge Coal Co.,	30,764	32,348
Clearview Coal Co.,	4,116	29,580
Butcher Creek Coal Co.,	30,800	28,031
Humbert Coal Co.,	73,294	21,857
Black Creek Coal Co.,	*	18,665
Cabin Run Coal Co.,	†	16,089
Troy Coal Co.,	4,850	15,792
Gorman and Campion,	20,141	14,429
Bright Coal Co.,	5,376	14,000
Dunn Coal Co.,	22,560	13,951
Blakely Coal Co.,	12,747	13,783
Randall and Schaad Bros. (Anthracite Coal Co.),	5,083	10,054
Fall Brook Coal Co.,	5,686	9,942
Stauffer and Trezise,	9,292	9,544
Minooka Coal Co.,	6,560	9,458
William Niswenter,	†	8,034
Moses Neyer,	6,033	8,027
Hacklebernie Coal Co.,	10,315	7,354
Outlook Coal Co.,	†	7,049
Thomas R. Reese and Sons,	4,517	6,237
West Mountain Coal Co.,	2,219	5,890
Salem Hill Coal Co.,	1,276	4,230
Clinton Falls Coal Co.,	7,171	3,864
Stillwater Coal Co.,	†	3,510
Dreshman Coal Co.,	3,283	2,849
E. White and Co.,	34,280	1,230

*Idle. †Not reported.

TABLE AA.—Number of gross tons of coal mined, number of days worked, number of persons employed, number killed and injured, quantity of explosives used, etc, 1909

Districts	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production in gross tons	Average number of days worked	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Explosives			Number of horses and mules
									Number of pounds of powder used	Number of pounds of dynamite used	Number of pounds of so-called safety explosives used	
First,	4,029,418	295,231	54,183	3,378,832	167	8,705	18	63	1,527,396	339,803	----------	801
Second,	4,705,600	409,201	58,642	4,173,443	211	12,002	36	60	2,898,555	609,951	----------	1,004
Third,	4,011,940	284,772	126,987	4,423,699	194	10,380	45	54	5,941,325	244,949	----------	991
Fourth,	3,770,143	132,029	162,587	4,064,759	207	8,482	25	81	4,091,400	248,389	----------	815
Fifth,	3,594,221	258,858	48,308	3,901,387	183	8,024	20	41	3,131,367	89,317	----------	553
Sixth,	4,083,421	392,706	41,460	4,517,587	207	10,144	49	74	4,335,875	369,573	----------	1,084
Seventh,	4,533,368	516,358	191,080	5,240,806	172	10,551	39	67	3,214,975	436,660	116,604	1,169
Eighth,	3,168,030	432,676	90,968	3,691,674	200	9,180	39	78	2,903,118	1,090,099	----------	1,096
Ninth,	4,909,642	412,394	171,248	5,493,284	206	10,332	30	54	3,120,275	194,809	34,046	1,222
Tenth,	3,437,080	358,334	48,565	3,843,979	213	9,284	42	52	1,482,784	498,172	----------	742
Eleventh,	3,719,265	629,397	138,733	4,487,395	207	10,308	30	66	1,300,665	1,281,552	9,175	1,199
Twelfth,	2,324,905	300,026	47,584	2,672,515	208	7,438	20	20	1,391,825	397,445	5,896	572
Thirteenth,	2,351,039	364,525	50,246	2,765,810	196	8,259	27	31	883,650	447,564	21,838	603
Fourteenth,	1,955,774	268,054	35,524	2,259,352	204	5,666	11	45	192,474	674,980	145,982	538
Fifteenth,	2,444,995	336,235	41,773	2,823,003	206	7,920	29	16	1,236,599	789,898	35,509	721
Sixteenth,	2,175,858	281,926	65,494	2,523,278	217	6,958	23	35	1,421,635	259,078	200	753
Seventeenth,	3,350,377	423,899	129,671	3,903,947	254	8,090	34	44	184,903	1,115,400	----------	564
Eighteenth,	2,198,397	338,258	35,723	2,572,378	204	6,744	24	75	960,975	674,965	62,631	550
Nineteenth,	2,256,304	419,979	34,099	2,710,292	215	7,259	11	40	485,214	695,214	234,946	609
Twentieth,	1,761,240	380,687	39,075	2,181,002	239	5,559	15	38	486,850	356,798	----------	545
Totals, 1909,	62,781,017	7,235,545	1,611,860	71,628,422	205	171,195	567	1,034	41,191,857	10,724,616	666,827	16,122

TABLE AA—Continued

Number of tons of coal mined, number of days worked, number of persons employed, number killed and injured, quantity of explosives used, etc., 1909

	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production in gross tons	Average number of days worked	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Explosives			Number of horses and mules
									Number of pounds of powder used	Number of pounds of dynamite used	Number of pounds of so-called safety explosives used	
Totals, 1908,	65,631,537	7,428,600	1,532,044	74,592,181	211	174,503	678	1,170	1,975,232	10,766,245	----------	16,837
Totals, 1907,	67,980,950	7,336,999	1,518,133	76,836,082	227	168,774	768	1,369	1,905,468	10,544,781	----------	17,125
Totals, 1906,	56,624,032	6,426,911	1,359,334	64,410,277	206	166,175	557	1,212	1,614,083	7,980,733	----------	16,972
Totals, 1905,	62,441,134	6,359,280	1,420,140	70,220,554	208	168,254	644	1,289	1,902,820	8,353,594	----------	17,500
Totals, 1904,	58,158,288	6,171,748	1,379,222	65,709,258	213	161,330	595	1,047	1,791,192	6,519,312	----------	17,085
Totals, 1903,	60,231,104	5,710,341	1,230,506	67,171,951	211	158,827	518	1,325	1,701,176	5,317,422	----------	16,872
Totals, 1902,	31,551,813	4,424,779	934,957	36,911,549	116	148,141	300	641	845,147	2,130,965	----------	16,139
Totals, 1901,	53,447,902	5,279,375	1,178,674	59,905,951	195	147,651	513	1,243	1,520,804	4,155,685	----------	16,059
Totals, 1900,	45,271,608	4,880,932	1,064,778	51,217,318	171	143,826	411	1,057	1,237,180	3,454,641	----------	15,708

TABLE AA—Part 2, 1909

Districts	Boilers					Locomotives			Number of steam engines of all classes	Total horse power	Number of pumps delivering water to surface	Capacity in gallons per minute	Quantity delivered to surface per minute—gallons	Number of electric dynamos	Number of air compressors
	Cylindrical	Horse power	Tubular	Horse power	Total horse power	Steam	Air	Electric							
First,	57	1,699	125	15,233	16,932	23	11	36	263	21,024	65	84,202	30,229	15	10
Second,	130	4,106	118	20,190	24,296	36	29	30	351	31,262	61	67,194	37,200	25	18
Third,	23	731	99	17,965	18,696	10	3	25	270	17,219	32	27,231	17,344	10	7
Fourth,	29	1,488	68	18,137	19,625	11		60	226	17,393	40	39,478	25,206	24	8
Fifth,	54	1,170	89	16,455	17,625	13		66	224	16,840	37	46,390	25,517	11	5
Sixth,	21	525	160	27,112	27,637	23	11	41	473	27,412	47	46,640	25,326	12	23
Seventh,	27	729	135	28,692	29,421	27	10	9	577	48,559	47	39,041	22,915	8	26
Eighth,			154	30,290	30,290	13	4	25	365	27,432	69	68,935	41,170	18	17
Ninth,	135	3,879	128	24,435	28,314	13	3	20	487	41,727	30	36,119	16,662	7	24
Tenth,	33	1,155	96	20,952	22,107	26	13	35	218	26,668	32	26,788	15,510	11	23
Eleventh,	94	3,050	285	48,580	51,630	94	12	9	441	47,384	94	110,857	58,047	13	20
Twelfth,			147	20,750	20,750	13	13	4	156	30,329	29	39,513	14,637	1	8
Thirteenth,			199	27,130	27,130	42	5		273	35,774	33	33,626	13,115	1	12
Fourteenth,	39	1,431	112	15,782	17,213	28	4	11	149	19,049	27	30,968	18,611	3	5
Fifteenth,	12	360	142	22,820	23,180	19	3	12	207	27,300	43	46,040	22,486	5	14
Sixteenth,	16	512	133	17,470	17,982	18		5	193	24,293	43	39,908	12,270	4	14
Seventeenth,	3	186	161	31,384	31,570	44	1	33	261	13,429	29	48,855	17,720	7	12
Eighteenth,	117	5,120	185	23,495	28,615	33	6	6	246	29,281	51	54,173	26,178	5	17
Nineteenth,			153	27,365	27,365	25		12	272	35,344	35	45,082	15,347	8	15
Twentieth,	47	2,324	163	18,890	21,214	18		20	186	24,557	19	30,200	9,629	8	7
Totals,	837	28,465	2,852	473,127	501,592	529	128	459	5,838	562,276	863	961,240	465,119	196	285

TABLE A.—Number of each class of employes in each district, 1909

Occupations of Employes	Districts									
	First	Second	Third	Fourth	Fifth	Sixth	Seventh	Eighth	Ninth	Tenth
Inside										
Mine foremen,	29	26	26	19	21	28	24	22	22	14
Assistant mine foremen,	26	25	22	14	23	54	53	41	24	21
Fire bosses and assistants,	1	51	54	50	21	31	60	39	66	67
Miners,	2,321	3,166	2,651	2,233	2,199	2,752	3,077	2,910	2,610	2,436
Miners' laborers,	2,381	3,116	2,694	2,153	2,002	2,236	2,002	1,449	2,556	2,343
Drivers and runners,	838	1,102	1,150	601	452	1,029	874	859	934	842
Doorboys and helpers,	185	260	217	164	157	193	389	180	317	205
Pumpmen,	46	88	44	50	54	58	77	121	55	48
Company men,	415	709	711	621	457	763	668	545	751	696
All other employes,	312	620	561	642	546	509	806	668	689	637
Totals,	6,554	9,163	8,130	6,547	5,932	7,653	8,030	6,834	8,024	7,109
Outside										
Superintendents,	14	10	15	3	9	4	4	9	7	3
Foremen,	22	21	27	23	17	13	24	19	22	11
Blacksmiths and carpenters,	115	169	109	91	102	166	133	167	157	134
Engineers and firemen,	236	338	211	185	205	270	362	275	338	281
Slate pickers (boys),	398	510	544	425	568	531	447	435	376	458
Slate pickers (men),	238	430	252	77	179	243	150	165	235	93
Bookkeepers and clerks,	37	39	45	53	38	39	45	45	40	42
All other employes,	1,091	1,322	1,047	1,078	974	1,225	1,356	1,231	1,133	1,153
Totals,	2,151	2,839	2,250	1,935	2,092	2,491	2,521	2,346	2,308	2,175
Grand totals inside and outside,	8,705	12,002	10,380	8,482	8,024	10,144	10,551	9,180	10,332	9,284

TABLE A.—Continued

Occupations of Employes	Districts										Grand totals inside and outside
	Eleventh	Twelfth	Thirteenth	Fourteenth	Fifteenth	Sixteenth	Seventeenth	Eighteenth	Nineteenth	Twentieth	
Inside											
Mine foremen,	40	11	17	19	15	15	24	18	21	14	425
Assistant mine foremen,	69	65	68	48	55	44	18	18	36	54	778
Fire bosses and assistants,	14	5	17	9	27	39	49	39	30	15	684
Miners,	2,902	1,732	1,635	954	2,491	2,104	1,544	1,782	1,978	1,198	44,675
Miners' laborers,	1,544	986	1,199	749	930	846	934	879	786	447	32,232
Drivers and runners,	570	358	333	236	416	329	304	312	343	278	11,960
Doorboys and helpers,	116	78	50	108	69	56	99	74	53	56	3,026
Pumpmen,	80	28	52	28	62	33	25	45	35	29	1,058
Company men,	545	659	734	557	387	447	1,184	609	624	542	12,021
All other employes,	1,001	1,026	1,009	843	1,098	898	1,138	684	911	1,215	15,813
Totals,	6,881	4,948	5,114	3,551	5,550	4,811	5,319	4,460	4,814	3,848	123,272
Outside											
Superintendents,	12	2	7	4	5	4	4	12	10	4	142
Foremen,	35	21	31	18	19	17	28	28	28	16	440
Blacksmiths and carpenters,	258	104	157	101	139	112	133	139	134	96	2,716
Engineers and firemen,	455	291	378	220	323	268	411	346	316	272	5,981
Slate pickers (boys),	448	554	544	339	565	455	259	384	420	203	8,863
Slate pickers (men),	340	209	182	103	121	96	186	130	167	20	3,616
Bookkeepers and clerks,	63	44	63	28	47	48	50	37	50	27	880
All other employes,	1,816	1,265	1,783	1,302	1,151	1,147	1,610	1,208	1,320	1,073	25,285
Totals,	3,427	2,490	3,145	2,115	2,370	2,147	2,681	2,284	2,445	1,711	47,923
Grand totals inside and outside,	10,308	7,438	8,259	5,666	7,920	6,958	8,000	6,744	7,259	5,559	171,195

TABLE B.—Causes of fatal accidents in and about the mines, and number attributable to each cause; number of wives made widows and children made orphans by reason of such accidents, 1909

Causes of Fatal Accidents	Districts													
	First	Second	Third	Fourth	Fifth	Sixth	Seventh	Eighth	Ninth	Tenth	Eleventh	Twelfth	Thirteenth	Fourteenth
Inside														
Falls of coal, slate and roof,	8	22	23	10	14	25	18	24	21	14	11	5	8	3
Mine cars,	3	3	6	7	3	4	9	5	2	5	4	2	4	1
Explosions of gas,		1				8	1	1	4	2	1	1	1	1
Suffocation by gas, etc.,						2	1	2		8		1	1	
Explosions of powder and dynamite,			2	2		1	2		1	1	1	3	3	1
Blasts, premature and otherwise,	1	4	9	3	1	5	3			3	3	2	2	1
Falling into shafts, slopes, etc.,	1	4				1	1			2		2		
Crushed at batteries,												1		1
Kicked by mules, etc.,	1		1								2			
Machinery,														
Electricity,			1	2										
Miscellaneous,	1		2				1	3		1		1		
Totals,	15	34	44	24	18	46	36	35	28	36	22	18	19	8
Outside														
Cars,	2	2	1			1	2			3	2		2	2
Machinery,						1		2		1	5	1	3	1
Suffocation in chutes, etc.,					2		1	1					1	
Boiler explosions,														
Electricity,														
Miscellaneous,	1			1		1		1	2	2	1	1	2	
Totals,	3	2	1	1	2	3	3	4	2	6	8	2	8	3
Grand totals inside and outside,	18	36	45	25	20	49	39	39	30	42	30	20	27	11

Widows, 310. Orphans, 690.

Note: The above table covers a period of six years, 1904–1909, and shows the percentage of accidents from each cause for each year.

For 1909 the percentage of loss of life by falls was 51.84; the average percentage, considering the six years, was 49.06, or an excess of 2.78 per cent. for 1909. The percentage of life lost by cars during the six years was 14.68, while the percentage for 1909 was 14.49, or .19 per cent. lower. The percentage of loss of life by explosions of gas during the six years was 7.34, while the percentage for 1909 was 1.63 per cent. lower than the average. The percentage of loss of life by suffocation by gas during the six years was 2.47, or 1 per cent. lower than for 1909. The percentage of loss of life during the six years by explosions of powder and dynamite and premature explosions was 14.43, while for 1909 it was 14.08, a reduction of .35 per cent.

The percentages of other accidents inside the mines do not vary very much from year to year.

The outside accidents by cars during 1909 were 33.77 per cent. of the total number, while the average for the past six years was 37.52, a reduction of 3.75 per cent. in favor of 1909. The accidents by cars and machinery outside are abnormally high and should be reduced at least one-half, while the accidents from suffocation in chutes show a criminal negligence on the part of the persons in charge of the breakers and the loading of coal.

TABLE B.—Continued.

Causes of Fatal Accidents	Districts						Totals	Percentages for 1909	Percentages for 1908	Percentages for 1907	Percentages for 1906	Percentages for 1905	Percentages for 1904
	Fifteenth	Sixteenth	Seventeenth	Eighteenth	Nineteenth	Twentieth							
Inside													
Falls of coal, slate and roof	14	11	4	10	5	4	254	51.84	47.65	46.42	46.93	53.54	47.98
Mine cars	5	2	3			3	71	14.49	15.10	14.64	14.69	14.88	14.31
Explosions of gas	3		2	1	1		28	5.71	9.56	7.32	9.43	5.99	6.05
Suffocation by gas, etc.			2				17	3.47	.67	3.33	1.53	1.81	4.03
Explosions of powder and dynamite		2	1	1	1		22	4.49	3.86	2.83	6.14	2.91	7.06
Blasts, premature and otherwise	1	1	2	5	1		47	9.59	11.58	11.65	11.62	7.99	6.86
Falling into shafts, slopes, etc.	2	2	1	1		1	18	3.67	3.69	4.16	4.39	7.80	5.24
Crushed at batteries		1		1			4	.82	.34	.33	.44	.55	.61
Kicked by mules, etc.	1		1				6	1.23	.67	1.33	.66	.36	1.21
Machinery									.17	.33	.44		
Electricity			3				6	1.22	.17	.50			
Miscellaneous	1		4	1		2	17	3.47	6.54	7.16	3.73	4.17	6.65
Totals	27	19	23	20	8	10	490	100.00	100.00	100.00	100.00	100.00	100.00
Outside													
Cars		1	2	2	2	2	26	33.77	42.68	44.86	35.65	24.73	43.44
Machinery	1	2	2	1			20	25.97	35.37	27.10	22.77	35.48	15.15
Suffocation in chutes, etc.			4			1	10	12.99	1.22	2.80	8.91	11.83	8.08
Boiler explosions									1.22	.94	.99	1.08	2.02
Electricity									1.22	1.87			
Miscellaneous	1	1	3	1	1	2	21	27.27	18.29	22.43	31.68	26.88	31.31
Totals	2	4	11	4	3	5	77	100.00	100.00	100.00	100.00	100.00	100.00
Grand totals inside and outside	29	23	34	24	11	15	567						

TABLE C.—Causes of non-fatal accidents in and about the mines, and number attributable to each cause, 1909.

Causes of Non-Fatal Accidents	Districts																				Totals	Percentages
	First	Second	Third	Fourth	Fifth	Sixth	Seventh	Eighth	Ninth	Tenth	Eleventh	Twelfth	Thirteenth	Fourteenth	Fifteenth	Sixteenth	Seventeenth	Eighteenth	Nineteenth	Twentieth		
Inside																						
Falls of coal, slate and roof,	23	25	24	31	16	26	24	19	12	19	13	6	11	12	4	17	4	14	13	12	325	38.06
Mine cars,	13	13	10	17	9	13	11	21	9	9	9	3	2	12	3	4	5	7	2	9	181	21.19
Explosions of gas,	------	2	1	------	1	16	------	5	6	4	9	5	------	2	2	2	7	14	14	2	92	10.77
Explosions of powder and dynamite,	3	1	------	2	1	2	1	4	1	------	3	1	1	------	1	3	1	3	2	1	31	3.63
Blasts, premature and otherwise,	------	5	9	11	2	4	------	14	6	2	10	2	7	1	2	3	6	13	------	------	97	11.36
Falling into shafts, slopes, etc.,	------	------	------	1	------	------	------	------	------	1	------	------	2	------	------	------	------	6	------	2	12	1.41
Crushed at batteries,	------	------	------	------	------	------	------	------	------	------	------	------	------	4	------	------	1	------	------	1	6	.70
Kicked by mules, etc.,	2	5	------	4	------	1	2	3	1	------	------	------	------	------	------	------	------	------	------	1	19	2.22
Machinery,	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------
Electricity,	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------
Miscellaneous,	3	------	4	6	7	3	15	7	9	5	9	------	2	2	1	2	6	5	3	2	91	10.66
Totals,	44	51	48	72	36	65	53	73	44	40	53	17	25	33	13	31	30	62	34	30	854	100.00
Outside																						
Cars,	12	3	1	3	3	------	6	1	3	3	7	3	2	3	1	2	4	2	1	3	63	35.00
Machinery,	1	1	2	1	------	4	3	1	------	3	1	------	3	1	1	------	2	3	3	1	31	17.22
Boiler explosions,	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------
Electricity,	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------
Miscellaneous,	6	5	3	5	2	5	5	3	7	6	5	------	1	8	1	2	8	8	2	4	86	47.78
Totals,	19	9	6	9	5	9	14	5	10	12	13	3	6	12	3	4	14	13	6	8	180	100.00
Grand totals inside and outside,	63	60	54	81	41	74	67	78	54	52	66	20	31	45	16	35	44	75	40	38	1,034	------

TABLE D.—Numer of gaseous and non-gaseous mines in operation; number of foremen, assistants and fire-bosses; production and percentage of production in gross tons from gaseous and non-gaseous mines and washeries, by districts, 1909.

Districts	Gaseous Mines				Non-gaseous Mines								
	Number of gaseous mines in operation	Number of mine foremen	Number of assistant mine foremen	Number of fire-bosses	Number of non-gaseous mines in operation	Number of mine foremen	Number of assistant mine foremen	Production from gaseous mines	Production from non-gaseous mines	Production from washeries	Percentage of production from gaseous mines	Percentage of production from non-gaseous mines	Percentage of production from washeries
First,	1	1	1	1	53	28	25	78,514	2,980,481	319,837	2.32	88.21	9.47
Second,	17	18	18	51	14	8	7	2,764,759	1,325,607	83,077	66.25	31.76	1.99
Third,	14	16	16	54	10	10	6	3,067,714	796,901	559,084	69.35	18.01	12.64
Fourth,	16	17	10	50	16	2	4	2,584,892	685,011	794,856	63.59	16.85	19.56
Fifth,	13	10	12	21	18	11	11	1,653,836	1,769,783	477,768	42.39	45.36	12.25
Sixth,	21	19	44	31	14	9	10	3,268,069	1,094,232	155,286	72.34	24.22	3.44
Seventh,	41	23	53	60	2	1	-------	4,676,960	112,475	451,371	89.03	2.19	8.78
Eighth,	15	17	33	39	9	5	8	3,035,465	527,166	129,043	82.22	14.28	3.50
Ninth,	18	18	19	66	13	4	5	4,108,074	842,481	542,729	74.78	15.34	9.88
Tenth,	31	13	14	67	8	1	7	3,154,030	689,949	----------	82.05	17.95	-------
Eleventh,	26	26	47	14	37	14	22	2,756,617	1,695,694	35,084	61.43	37.79	.78
Twelfth,	15	11	65	5	----------	----------	----------	2,672,515	----------	----------	100.00	----------	----------
Thirteenth,	29	15	62	17	5	2	6	2,321,722	202,564	241,524	83.94	7.33	8.73
Fourteenth,	17	16	44	9	9	3	4	1,974,943	284,409	----------	87.41	12.59	-------
Fifteenth,	13	7	19	27	18	8	36	1,430,988	1,337,387	54,628	50.69	47.37	1.94
Sixteenth,	17	12	27	39	19	3	17	1,451,473	1,023,654	48,151	57.52	40.57	1.91
Seventeenth,	17	18	11	49	19	6	7	3,022,912	576,406	304,629	77.43	14.77	7.80
Eighteenth,	21	13	10	39	18	5	8	1,878,660	693,718	----------	73.03	26.97	-------
Nineteenth,	34	18	26	30	15	3	10	1,977,283	626,197	106,812	72.96	23.10	3.94
Twentieth,	25	13	54	15	1	1	-------	1,835,946	219	344,837	84.18	.01	15.81
Totals and percentages,	401	301	585	684	298	124	193	49,715,372	17,264,334	4,648,716	69.41	24.10	6.49

TABLE E.—Quantity of coal produced by each company that produced 500,000 or more tons, and the number of persons employed 1909

Names of Companies	Inspection Districts	Production of coal in gross tons	Employes
Philadelphia and Reading Coal and Iron Company,	Twelfth, Thirteenth, Fourteenth, Fifteenth, Sixteenth, Eighteenth, Nineteenth, Twentieth,	10,050,485	28,842
Delaware, Lackawanna and Western Railroad Company,	Second, Third, Fourth, Fifth, Eighth, Ninth, Tenth,	8,416,923	18,604
Lehigh Valley Coal Company,	Sixth, Seventh, Eighth, Eleventh, Twelfth, Thirteenth, Fourteenth, Fifteenth, Seventeenth, Twentieth,	5,585,293	12,477
Delaware and Hudson Company,	First, Second, Fourth, Sixth, Seventh, Ninth,	5,462,169	13,099
Pennsylvania Coal Company,	Third, Fifth, Sixth,	4,833,439	10,158
Lehigh and Wilkes-Barre Coal Company,	Seventh, Ninth, Tenth, Eighteenth,	4,261,538	9,744
Lehigh Coal and Navigation Company,	Seventeenth,	3,009,722	6,519
Scranton Coal Company,	First, Second, Third, Fourth,	2,346,977	6,507
Kingston Coal Company,	Eighth, Ninth,	2,037,225	3,495
Temple Iron Company,	Second, Eighth,	1,756,911	4,577
Mineral Railroad and Mining Company,	Fifteenth, Sixteenth,	1,580,530	4,914
Susquehanna Coal Company,	Tenth, Thirteenth,	1,558,565	4,289
Hillside Coal and Iron Company,	First, Fifth, Sixth,	1,324,199	3,257
Hudson Coal Company,	Third, Fifth, Sixth,	1,259,245	3,347
G. B. Markle and Company,	Eleventh,	1,122,161	1,833
Coxe Brothers and Company, Incorporated,	Eleventh, Seventeenth, Eighteenth,	1,030,603	2,282
Summit Branch Mining Company,	Twentieth,	832,494	2,215
Jermyn and Company,	Fifth,	763,126	1,195
Price Pancoast Coal Company,	Third,	701,131	1,467
West End Coal Company,	Tenth,	621,938	1,409
Mill Creek Coal Company,	Eighteenth,	579,147	1,103
A. Pardee and Company,	Eleventh,	547,738	1,490
Pardee Brothers and Company,	Eleventh,	518,184	886
Totals,		60,202,743	143,709

The 23 companies named in this table, out of 132 companies in the region, produced 60,202,743 tons, or 84.05 per cent. of the total output, 71,628,422 tons.

TABLE F.—Classification of employes killed or fatally injured in and about the mines, 1877-1909

Employes Killed or Fatally Injured	Years																
	1877	1878	1879	1880	1881	1882	1883	1884	1885	1886	1887	1888	1889	1890	1891	1892	1893
Inside																	
Mine foremen and assistants,	1	2	2	3	------	3	2	1	------	2	1	1	4	1	------	3	3
Fire bosses and assistants,	------	4	2	------	5	5	1	1	3	2	5	2	2	5	6	4	1
Miners,	119	94	141	88	114	135	136	132	160	131	102	169	194	146	180	180	195
Miners' laborers,	32	28	37	38	70	56	67	81	86	68	57	87	79	95	119	111	108
Drivers and runners,	9	11	22	18	28	28	47	28	16	18	23	33	39	37	38	39	47
Doorboys, etc.,	4	3	6	8	17	19	18	13	6	6	10	9	10	8	7	8	12
All others,	11	21	22	31	4	14	3	30	19	9	72	16	11	31	22	16	22
Totals,	176	163	232	186	234	250	274	286	290	236	270	317	339	323	372	361	388
Outside																	
Foremen,	------	------	------	------	------	------	------	------	------	1	3	------	1	1	------	------	2
Blacksmiths and carpenters,	1	------	2	------	------	------	7	4	6	1	3	1	1	13	2	1	2
Engineers and firemen,	------	1	2	2	2	2	11	9	7	6	3	3	9	8	3	4	------
Slate pickers,	5	6	9	6	10	11	7	12	13	9	9	6	10	12	11	7	11
All others,	12	17	17	8	27	28	24	21	16	26	28	37	37	21	40	45	53
Totals,	18	24	30	16	39	41	49	46	42	43	46	47	58	55	56	57	68
Grand totals inside and outside,	194	187	262	202	273	291	323	332	332	279	316	364	397	378	428	418	456

TABLE F.—Continued

Employes Killed or Fatally Injured	Years															
	1894	1895	1896	1897	1898	1899	1900	1901	1902	1903	1904	1905	1906	1907	1908	1909
Inside																
Mine foremen and assistants,	1	5	3	3	5	2		5	2	3	3	1	2	2	3	1
Fire bosses and assistants,		1	4	2	4	2	5	2	3	2	1	2	6	2	3	2
Miners,	218	179	204	210	176	199	184	224	114	202	233	308	226	309	313	264
Miners' laborers,	91	115	134	99	124	114	95	122	62	110	145	148	133	136	154	126
Drivers and runners,	38	33	46	26	33	39	33	45	27	46	31	31	32	46	49	37
Doorboys, etc.,	5	7	10	4	6	18	8	6	5	12	20	14	9	18	18	11
All others,	15	14	29	28	12	15	33	37	32	51	63	47	48	88	56	49
Totals,	368	354	430	372	360	389	358	441	245	426	496	551	456	601	596	490
Outside																
Foremen,					1	1				1	1		2		2	1
Blacksmiths and carpenters,		3	3	4		2	2		2	4	5	5	5	1	5	4
Engineers and firemen,	4	4	4	2	4	6	2	5	7	6	3	6	3	8	4	7
Slate pickers,	12	13	12	6	13	10	9	9	12	9	11	24	14	16	14	7
All others,	62	47	53	39	33	53	40	58	34	72	79	58	77	82	57	58
Totals,	78	67	72	51	51	72	53	72	55	92	99	93	101	107	82	77
Grand totals inside and outside,	446	421	502	423	411	461	411	513	300	518	595	644	557	708	678	567

TABLE G.—Number and causes of fatal accidents in and about the mines by decades, 1870-1909

	1870–1879	Percentages	1880–1889	Percentages	1890–1899	Percentages	1900–1909	Percentages	Grand totals
Inside									
By falls of coal, slate and roof,	927	46.44	1,351	50.37	1,928	51.87	2,291	49.16	6,497
By mine cars,	263	13.18	470	17.52	535	14.39	710	15.23	1,978
By explosions of gas,	243	12.17	250	9.32	399	10.74	352	7.55	1,244
By explosions of powder and dynamite,	76	3.81	82	3.06	117	3.15	206	4.42	481
By explosions of blasts, etc.,	124	6.21	182	6.79	289	7.53	435	9.34	1,021
By falling into shafts, slopes, etc.,	100	5.01	117	4.36	178	4.79	241	5.17	636
Crushed at batteries,	12	.60	5	.19	12	.32	17	.37	46
By mules,	16	.80	8	.30	44	1.18	37	.79	105
By suffocation,	53	2.66	10	.37	114	3.07	103	2.21	280
By electricity,							10	.22	10
By miscellaneous causes,	182	9.12	207	7.72	110	2.96	258	5.54	757
Totals and percentages,	1,996	100.00	2,682	100.00	3,717	100.00	4,660	100.00	13,055
Outside									
By cars,	76	30.16	167	39.11	199	31.74	316	38.03	758
By machinery,	66	26.19	110	25.76	127	20.26	212	25.51	515
By suffocation in chutes,	14	5.56	3	.70	33	5.26	54	6.50	104
By boiler explosions,	21	8.33	29	6.79	36	5.74	9	1.08	95
By electricity,							3	.36	3
By miscellaneous causes,	75	29.76	118	27.64	232	37.00	237	28.52	662
Totals and percentages,	252	100.00	427	100.00	627	100.00	831	100.00	2,137
Grand totals inside and outside,	2,248		3,109		4,344		5,491		15,192

TABLE H.—Nationality of employes killed or fatally injured in and about the mines, 1892-1909

Nationality	1892–1894	1895–1899	1900–1904	1905–1909
American,	232	390	570	643
English,	106	130	96	82
Welsh,	124	183	118	121
Scotch,	7	18	13	9
Irish,	214	362	217	160
German,	70	99	96	90
Totals,	753	1,182	1,110	1,105
Polish,	307	618	598	928
Hungarian,	144	219	103	97
Italian,	49	62	129	226
Slavonian,	26	27	125	215
Lithuanian,	13	23	113	302
Austrian,	16	36	69	91
Russian,	6	26	69	151
Greek,	2	16	6	16
Swedish,	3	10	4	4
French,	1	1	3	
Tyrolean,		1	6	15
Bohemian,		1		1
Assyrian,			1	
Canadian,			1	1
Montenegrian,				2
Totals,	567	1,040	1,227	2,049
Grand totals,	1,320	2,222	2,337	3,154

TABLE 1.—Production of coal; production per employe inside; quantity of explosives used, and production for each pound of explosive used, 1892-1909

Years	Production (in tons of 2,000 pounds)	Average number of tons of coal produced per employe inside	Explosives			Average number of tons of coal produced per each pound of explosive used
			Number of pounds of black powder used	Number of pounds of dynamite used	Number of pounds of so-called safety explosives used	
1892,	51,226,977	624	30,981,875	1,092,190	----------	1.59
1893,	52,841,110	611	31,723,771	1,324,142	----------	1.60
1894,	50,966,920	588	30,755,450	1,713,235	----------	1.57
1895,	56,948,756	638	32,766,775	1,797,494	----------	1.65
1896,	53,843,249	508	32,117,950	1,733,970	----------	1.59
1897,	52,581,036	549	31,804,950	2,415,650	----------	1.54
1898,	52,802,594	579	30,670,100	3,025,015	----------	1.57
1899,	60,518,331	656	34,317,275	3,649,417	----------	1.59
1900,	57,363,396	609	30,929,500	3,454,641	----------	1.67
1901,	67,094,665	682	38,020,100	4,155,685	----------	1.59
1902,	41,340,935	*482	21,128,675	2,130,965	----------	†1.77
1903,	75,232,585	‡737	42,529,400	5,317,422	----------	1.57
1904,	73,594,369	667	44,779,800	6,519,312	----------	1.43
1905,	78,647,020	676	47,570,500	8,353,594	----------	1.41
1906,	72,139,510	627	40,352,075	7,980,733	----------	1.41
1907,	86,056,412	730	47,636,700	10,550,191	----------	1.48
1908,	83,543,243	672	49,380,800	10,766,245	----------	1.39
1909,	80,223,833	651	41,191,857	10,724,616	666,827	1.53

The ton of 2,000 pounds is used so that a comparison can be made with the bituminous production per pound of powder used.

*This decrease in production per employe inside was caused by the small number of days worked on account of the strike.

†The increase in production per pound of powder used was caused by the production of the washeries during the strike.

‡The increase in production per employe was due to the large production of the washeries.

TABLE J.—Number of employes in and about the mines, by counties, 1885-1909

Counties	1885	1886	1887	1888	1889	1890	1891	1892	1893	1894	1895	1896	1897
Carbon,	2,627	3,255	3,076	4,563	3,487	3,409	3,312	3,848	4,410	5,391	4,352	4,333	4,748
Columbia,	1,826	2,036	1,944	2,087	1,886	2,505	2,797	2,435	2,663	2,624	2,627	2,781	1,977
Dauphin,	2,505	2,156	2,212	2,136	2,276	2,203	2,135	2,104	2,094	2,092	1,975	1,988	2,072
Lackawanna,	19,663	19,872	22,485	21,421	25,176	25,262	25,406	27,555	29,080	30,475	31,446	32,771	33,892
Luzerne,	40,600	41,499	42,719	41,641	45,221	43,314	45,830	48,369	51,395	53,097	55,885	56,955	55,138
Northumberland,	8,511	8,495	9,320	10,814	12,288	12,124	12,516	12,835	13,468	13,517	13,889	14,445	14,583
Schuylkill,	24,136	25,214	24,132	25,692	28,596	30,221	30,243	31,894	33,607	31,731	32,124	35,295	35,586
Sullivan,	236	227	249	273	256	237	229	261	307	----------	312	334	327
Susquehanna,	216	290	380	591	478	644	882	999	1,045	1,012	1,095	1,186	1,234
Wayne,	----------	----------	----------	----------	----------	----------	18	----------	----------	----------	----------	----------	----------
Totals,	100,320	103,044	106,517	112,218	119,664	119,919	123,308	130,300	138,069	139,939	143,705	150,088	149,557

Counties	1898	1899	1900	1901	1902	1903	1904	1905	1906	1907	1908	1909
Carbon,	3,983	3,993	4,242	4,365	3,805	4,051	4,467	4,240	4,469	4,782	5,522	5,155
Columbia,	2,436	2,302	2,033	2,329	2,339	2,236	2,192	2,368	2,246	2,295	2,412	2,393
Dauphin,	2,174	2,390	2,577	2,353	1,945	2,140	2,113	2,167	2,233	2,124	2,294	2,215
Lackawanna,	32,422	30,886	32,811	34,798	35,333	37,470	40,675	40,859	41,429	42,742	42,418	44,213
Luzerne,	51,820	50,803	52,015	53,280	52,766	55,639	59,136	60,734	58,441	58,795	63,099	60,500
Northumberland,	13,833	14,697	15,105	14,187	14,863	14,580	14,345	15,208	14,730	15,709	15,581	14,878
Schuylkill,	34,238	33,392	33,259	33,907	34,950	33,443	35,979	40,465	40,289	39,870	40,775	39,457
Sullivan,	321	465	521	434	752	648	665	536	634	719	875	963
Susquehanna,	1,193	1,210	1,250	1,409	1,386	1,367	1,392	1,307	1,320	1,275	1,302	1,227
Wayne,	----------	466	11	589	----------	253	366	370	384	463	225	194
Totals,	142,420	140,604	143,824	147,651	148,139	151,827	161,330	168,254	166,175	168,774	174,503	171,195

TABLE K.—Production of coal in tons, by counties, 1885-1909

Counties	1885	1886	1887	1888	1889	1890	1891	1892	1893
Carbon,	688,098	1,164,970	869,026	1,592,865	1,227,908	1,226,541	1,191,158	1,427,543	1,510,289
Columbia,	612,550	601,731	740,315	712,821	515,019	599,404	761,559	889,490	741,991
Dauphin,	561,653	407,864	625,708	579,941	605,773	577,490	633,569	639,879	640,723
Lackawanna,	7,174,442	7,401,289	8,925,779	10,125,019	8,770,807	9,374,359	10,184,348	11,410,554	11,667,550
Luzerne,	14,787,379	14,616,101	15,009,747	17,270,224	15,934,395	15,825,674	17,726,560	17,548,508	18,253,145
Northumberland,	2,561,131	2,250,822	2,844,390	2,994,223	2,973,548	3,098,547	3,672,828	3,724,234	3,731,405
Schuylkill,	7,546,255	7,876,003	8,359,953	8,055,708	8,613,283	9,045,216	9,758,111	9,564,534	9,992,086
Sullivan,	119,612	61,767	92,679	84,030	71,390	63,746	74,884	76,009	70,418
Susquehanna,	84,459	97,071	176,421	213,596	261,827	315,350	369,713	457,622	571,956
Wayne,							3,450		
Totals,	34,135,583	34,777,618	37,644,018	41,628 426	38,973,950	40,166,327	44,376,180	45,738,373	47,179,563

Counties	1894	1895	1896	1897	1898	1899	1900	1901	1902
Carbon,	1,589,395	1,577,146	1,488,550	1,327,235	1,445,288	1,630,595	1,663,961	1,659,392	986,127
Columbia,	510,537	493,042	443,330	481,453	569,175	895,061	875,643	1,080,231	658,991
Dauphin,	699,607	712,856	702,335	602,842	677,460	729,757	695,656	741,582	377,983
Lackawanna,	11,170,382	11,859,382	11,638,479	11,946,871	11,589,601	13,248,949	12,282,108	15,409,040	10,581,401
Luzerne,	17,243,928	19,143,101	17,964,900	17,141,809	17,793,773	19,899,742	19,179,573	21,396,312	13,016,026
Northumberland,	3,893,660	4,573,144	4,117,569	3,774,667	3,519,305	4,339,547	4,188,343	4,849,099	2,823,273
Schuylkill,	9,985,092	11,495,388	11,092,772	10,971,943	10,980,700	12,226,938	11,606,160	13,640,766	7,698,306
Sullivan,		152,141	151,758	164,046	147,533	163,555	209,922	136,195	365,194
Susquehanna,	413,578	840,904	474,637	476,488	422,939	624,125	496,432	663,487	404,248
Wayne,						275,955	19,520	329,877	
Totals,	45,506,179	50,847,104	48,074,330	46,947,354	47,145,174	54,034,224	51,217,318	59,905,951	36,911,549

TABLE K.—Continued

Counties	1903	1904	1905	1906	1907	1908	1909
Carbon,	1,919,662	2,012,064	2,211,077	2,006,092	2,466,538	2,486,559	2,368,747
Columbia,	1,208,843	1,028,236	1,097,944	865,237	1,060,954	1,055,648	975,985
Dauphin,	654,437	645,906	645,648	656,003	741,054	757,147	832,494
Lackawanna,	17,898,333	16,971,096	17,597,468	16,821,929	20,029,829	19,314,281	18,293,939
Luzerne,	24,891,394	24,736,864	26,779,139	23,760,886	27,547,399	28,329,462	27,671,702
Northumberland,	4,927,304	4,925,578	4,895,697	4,792,408	5,951,243	5,417,626	5,346,281
Schuylkill,	14,633,487	14,440,320	16,049,250	14,621,909	18,000,866	16,247,066	14,995,176
Sullivan,	262,002	262,772	277,229	320,203	386,697	491,708	572,514
Susquehanna,	714,976	618,250	607,273	501,877	575,079	435,625	526,639
Wayne,	61,513	68,172	59,829	63,733	76,423	57,059	44,945
Totals,	67,171,951	65,709,258	70,220,554	64,410,277	76,836,082	74,592,181	71,628,422

TABLE L.—Fatal accidents per 1,000 employes in and about the mines and production in tons per fatal accident, 1870-1909.

Years	Employes	Fatal accidents	Fatal accidents per 1,000 employes	Production in tons of 2,000 pounds	Production per fatal accident	Fatal accidents per 1,000,000 tons produced
1870,	35,600	211	5.93	14,172,004	67,166	14.89
1871,	37,488	210	5.60	15,532,252	73,963	13.52
1872,	44,745	223	4.98	15,567,973	69,811	14.32
1873,	48,199	264	5.48	21,001,521	79,551	12.57
1874,	53,402	231	4.33	19,930,240	86,278	11.59
1875,	69,966	238	3.40	23,402,646	98,330	10.17
1876,	70,474	228	3.24	23,440,666	102,810	9.73
1877,	66,842	194	2.90	24,727,213	127,460	7.85
1878,	63,964	187	2.92	20,900,966	111,770	8.95
1879,	68,847	262	3.81	31,036,600	118,460	8.44
1880,	73,373	202	2.75	27,974,532	138,488	7.22
1881,	76,031	273	3.59	34,202,558	125,284	7.98
1882,	82,200	291	3.54	35,057,430	120,472	8.30
1883,	91,421	323	3.53	37,747,369	116,865	8.56
1884,	101,073	332	3.28	36,468,738	109,846	9.10
1885,	100,320	332	3.31	38,232,155	115,157	8.68
1886,	103,044	279	2.71	38,950,932	139,609	7.16
1887,	106,517	316	2.97	42,156,300	133,406	7.50
1888,	122,218	364	2.98	46,635,037	128,118	7.81
1889,	119,964	397	3.32	43,650,768	109,952	9.09
1890,	119,919	378	3.15	44,986,286	119,011	8.40
1891,	123,308	428	3.47	49,701,322	116,125	8.61
1892,	130,300	418	3.21	51,226,978	122,553	8.16
1893,	138,069	456	3.30	52,841,110	115,880	8.63
1894,	139,939	446	3.19	50,966,920	114,276	8.75
1895,	143,705	421	2.93	56,948,756	135,270	7.39
1896,	150,088	502	3.34	53,843,250	107,257	9.32
1897,	149,557	423	2.83	52,581,036	124,305	8.04
1898,	142,420	411	2.89	52,812,675	128,498	7.78
1899,	140,604	461	3.28	60,518,331	131,276	7.62
1900,	143,824	411	2.86	57,363,396	139,570	7.16
1901,	147,651	513	3.47	67,094,665	130,789	7.65
1902,	148,139	300	2.03	41,340,935	137,803	7.26
1903,	151,827	518	3.41	75,232,563	145,237	6.89
1904,	161,330	595	3.69	73,594,369	123,688	8.08
1905,	168,254	644	3.83	78,647,020	122,123	8.19
1906,	166,175	557	3.35	72,139,510	129,514	7.72
1907,	168,774	708	4.20	86,056,412	121,549	8.23
1908,	174,503	678	3.88	83,543,243	123,220	8.12
1909,	171,195	567	3.31	80,223,833	141,488	7.07

Note: The above table shows that during the year 1870, 14.89 persons were killed or fatally injured for every million tons of coal produced, while in 1909 only 7.07 were killed for every million tons produced. In the first decade, 1870–1879, an average of 11.20 lives were lost for every million tons produced; 1880–1889, the average was 8.10; 1890–1899, the average was 8.27; 1900–1909, the average was 7.63.

The production per life lost during the past forty years will compare favorably with the loss of life in Great Britain during the same period.

The figures on this table show that while the accidents in the mines of the anthracite region have been increasing, the number of employes and the production of coal have also been increasing and at a much greater rate. A careful study of these figures and other figures given in this report and previous reports of this Department will convince the reader of the unjustness of much of the censure that has been placed upon the mine inspectors and the managers of the mines.



ANTHRACITE DISTRICTS



FIRST DISTRICT

LACKAWANNA, SUSQUEHANNA AND WAYNE COUNTIES

Carbondale, Pa., February 22, 1910.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor to transmit herewith my report as Inspector of Mines for the First Anthracite District, for the year ending December 31, 1909.

Respectfully submitted,

P. J. MOORE, Inspector.

SUMMARY OF STATISTICS

Number of collieries,	25
Number of mines,	54
Number of mines in operation,	54
Number of tons of coal shipped to market,	3,029,418
Number of tons used at mines for steam and heat,	295,231
Number of tons sold to local trade and used by employes,	54,183
Number of tons produced,	3,378,832
Number of tons produced by electrical machines,	.....
Number of tons produced by compressed air machines,	.....
Number of persons employed inside of mines,	6,554
Number of persons employed outside,	2,151
Number of fatal accidents inside of mines,	15
Number of fatal accidents outside,	3
Number of non-fatal accidents inside of mines,	44
Number of non-fatal accidents outside,	19
Number of tons of coal produced per fatal accident inside,	225,255
Number of persons employed per fatal accident inside,	437
Number of persons employed per fatal accident outside,	717
Number of persons employed per non-fatal accident inside,	149
Number of persons employed per non-fatal accident outside,	113
Number of wives made widows,	8
Number of children made orphans,	17
Number of steam locomotives used inside of mines,	2
Number of steam locomotives used outside,	21
Number of compressed air locomotives used inside,	11
Number of compressed air locomotives used outside,	.....
Number of electric motors used inside,	36
Number of electric motors used outside,	.....
Number of fans in use,	36
Number of furnaces in use,	1
Number of gaseous mines in operation,	1
Number of non-gaseous mines in operation,	53
Number of new mines opened,	3
Number of old mines abandoned,	1

TABLE A

PRODUCTION OF COAL

Names of Operators	Tons
Delaware and Hudson Company,	1,922,329
Hillside Coal and Iron Company,	643,966
Scranton Coal Company,	481,350
Northwest Coal Company,	190,696
Morss Hill Coal Company,	41,868
Carbondale Coal Company,	29,247
Humbert Coal Company,	19,515
Archbald Coal Company,	12,827
Fall Brook Coal Company,	8,877
Outlook Coal Company,	6,294
Spring Hill Coal Company,	5,673
West Mountain Coal Company,	5,259
Salem Hill Coal Company,	3,777
Clinton Falls Coal Company,	3,450
Stillwater Coal Company,	3,134
Ainsley Coal Company,	570
Total,	3,378,832

Production by Counties

Lackawanna,	2,807,248
Susquehanna,	526,639
Wayne,	44,945
Total,	3,378,832

TABLE B.—Fatal and non-fatal accidents inside and outside of mines; number of tons of coal produced per accident; number of persons employed; number employed per accident

Names of Operators	Fatal Accidents			Non-Fatal Accidents			Tons of coal produced per fatal accident inside	Tons of coal produced per non-fatal accident inside	Number of employes inside	Number of employes outside	Total number of employes	Number of employes inside per fatal accident	Number of employes outside per fatal accident	Number of employes inside per non fatal accident	Number of employes outside per non fatal accident
	Inside	Outside	Total	Inside	Outside	Total									
Delaware and Hudson Co.,	5	3	8	25	13	38	384,166	76,833	3,406	994	4,400	681	331	136	76
Hillside Coal and Iron Co.,	3	.....	3	13	3	16	214,655	49,536	1,419	457	1,876	473	.....	109	152
Scranton Coal Co.,	4	.....	4	3	1	4	120,337	109,450	937	360	1,297	234	.....	312	360
Northwest Coal Co.,	1	.....	1	2	1	3	190,696	95,348	384	80	464	384	.....	192	80
Carbondale Coal Co.,	1	.....	1	1	.....	1	29,247	29,247	56	20	76	56	.....	56	.....
Archbald Coal Co.,	.....	.....	.....	.....	1	1	.....	.....	38	41	79	.....	.....	.....	41
Spring Hill Coal Co.,	1	.....	1	.....	.....	.....	5,673	.....	23	21	44	23	.....	.....	.....
Miscellaneous Companies,	.....	.....	.....	.....	.....	.....	.....	.....	291	178	469	.....	.....	.....	.....
Totals and averages for district,	15	3	18	44	19	63	225,255	76,792	6,554	2,151	8,705	437	717	149	113

TABLE C.—Classification of Fatal Accidents Inside and Outside of Mines

	Months													
	January	February	March	April	May	June	July	August	September	October	November	December	Totals	Percentages
Causes of Accidents Inside														
Falls of roof,	....	1	1	1	....	1	....	2	1	1	....	....	8	53.33
Mine cars,	1	....	....	....	....	....	1	....	....	....	....	1	3	20.00
Blasts, premature and otherwise,	....	....	....	1	....	....	....	....	....	....	....	....	1	6.67
Falling into shafts,	....	....	....	....	....	1	....	....	....	....	....	....	1	6.67
Mules,	....	....	....	....	....	....	....	....	1	....	....	....	1	6.67
Miscellaneous,	1	....	....	....	....	....	....	....	....	....	....	....	1	6.66
Totals,	2	1	1	2	....	2	1	2	2	1	....	1	15	100.00
Causes of Accidents Outside														
Cars,	....	....	1	....	....	....	1	....	....	....	....	....	2	66.67
Miscellaneous,	....	....	....	....	....	....	....	....	....	....	....	1	1	33.33
Totals,	....	....	1	....	....	....	1	....	....	....	....	1	3	100.00
Grand totals inside and outside,	2	1	2	2	....	2	2	2	2	1	....	2	18	.....

TABLE D.—Classification of Non-Fatal Accidents Inside and Outside of Mines

	Months													
	January	February	March	April	May	June	July	August	September	October	November	December	Totals	Percentages
Causes of Accidents Inside														
Falls of coal,	....	....	....	....	1	....	1	....	....	....	....	....	2	4.54
Falls of roof,	1	....	5	2	2	2	1	1	2	3	1	1	21	47.73
Mine cars,	2	....	1	2	2	1	1	1	....	1	1	1	13	29.55
Explosions of powder and dynamite,	....	....	....	1	....	....	....	....	2	....	....	....	3	6.82
Mules,	....	....	1	....	....	....	....	1	....	....	....	....	2	4.54
Miscellaneous,	....	1	....	....	....	....	....	....	1	....	....	1	3	6.82
Totals,	3	1	7	5	5	3	3	3	5	4	2	3	44	100.00
Causes of Accidents Outside														
Cars,	2	1	1	....	3	2	1	....	....	....	2	....	12	63.16
Machinery,	....	....	....	....	....	....	....	....	....	....	....	1	1	5.26
Miscellaneous,	....	....	1	....	1	....	1	....	....	....	2	1	6	31.58
Totals,	2	1	2	....	4	2	2	....	....	....	4	2	19	100.00
Grand totals inside and outside,	5	2	9	5	9	5	5	3	5	4	6	5	63	....

TABLE E.—Occupations of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Inside													
Miners,	....	1	1	2	....	....	....	1	....	....	....	....	5
Miners' laborers,	....	....	....	....	....	2	1	1	1	1	....	....	6
Drivers and runners,	....	....	....	....	....	....	....	....	1	....	....	....	1
Doorboys and helpers,	....	....	....	....	....	....	....	....	....	....	....	1	1
Track men,	1	....	....	....	....	....	....	....	....	....	....	....	1
Brakemen,	1	....	....	....	....	....	....	....	....	....	....	....	1
Totals,	2	1	1	2	....	2	1	2	2	1	....	1	15
Outside													
Laborers,	....	....	1	....	....	....	....	....	....	....	....	1	2
Brakemen,	....	....	....	....	....	....	1	....	....	....	....	....	1
Totals,	....	....	1	....	....	....	1	....	....	....	....	1	3
Grand totals inside and outside,	2	1	2	2	....	2	2	2	2	1	....	2	18

TABLE F.—Occupations of Persons Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Inside													
Miners,	....	1	3	2	3	2	1	1	2	2	....	....	17
Miners' laborers,	1	..	2	1	....	1	1	1	3	1	1	2	14
Drivers and runners,	1	....	2	1	1	.	1	1	....	1	.	1	9
Doorboys and helpers,	....	....	....	....	1	....	....	....	....	....	1	....	2
Motormen,	....	....	....	1	....	....	....	....	....	....	....	....	1
Headmen,	1	....	....	....	....	....	....	....	....	....	....	....	1
Totals,	3	1	7	5	5	3	3	3	5	4	2	3	44
Outside													
Engineers and firemen,	....	....	....	....	....	....	1	....	....	....	....	1	2
Drivers,	1	....	....	....	1	....	....	....	....	....	....	....	2
Motormen,	....	....	....	....	....	1	....	....	....	....	....	....	1
Laborers,	1	1	1	....	1	1	1	....	....	....	4	1	11
Headmen,	....	....	....	....	1	....	....	....	....	....	....	....	1
Machine helpers,	....	....	1	....	....	....	....	....	....	....	....	....	1
Foot-boys,	....	....	....	....	1	....	....	....	....	....	....	....	1
Totals,	2	1	2	....	4	2	2	....	....	....	4	2	19
Grand totals inside and outside,	5	2	9	5	9	5	5	3	5	4	6	5	63

TABLE G.—Nationality of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
American,	2	1		1			1		1			2	8
Polish,			2			1	1			1			5
Italian,								2					2
Lithuanian,						1							1
Austrian,				1									1
Russian,									1				1
Totals,	2	1	2	2		2	2	2	2	1		2	18

TABLE H.—Nationality of Persons Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
American,	3	1	4	2	3	1	2	1		2	2	2	23
English,			1				1						2
Irish,			1	2								1	4
German,												1	1
Polish,	1		1		2		1	1		1			7
Italian,	1	1		1	1	3			3		2	1	13
Lithuanian,			1					1		1			3
Austrian,			1		2	1							4
Russian,					1		1		2		2		6
Totals,	5	2	9	5	9	5	5	3	5	4	6	5	63

TABLE I.—Operators and mines, kind of openings, type and size of fans, size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents and number of persons employed inside

Names of Operators and Mines	Kind of opening	Gaseous or non gaseous	Method of ventilation	Diameter of fan in feet and inches	Width of blades in feet and inches	Depth of blades in feet and inches	Number of revolutions per minute	Water gauge developed—in inches	Name of fan	Power used	Number of splits of air currents	Number of cubic feet of air per minute entering the mine at inlet	Total quantity of air per minute circulating in all the splits in cubic feet	Number of cubic feet per minute passing out at outlet	Number of persons employed inside
Delaware and Hudson Co. Coal Brook Colliery:*															
Coal Brook No. 1,	Tunnel,			20 a	5	6	75	1.7		Steam,	2	28,000	35,000	39,000	100
Coal Brook No. 1, Grassy,	Drift,			17 b	4.5	4.5	90	1.2		Electricity,	4	85,000	80,000	87,000	135
Coal Brook No. 2, Grassy,	Tunnel,			20 a	5	6	75	1.7		Electricity,	2	32,000	30,000	33,000	125
Coal Brook No. 3, Grassy,	Tunnel,			10 c	3	3	90	.6		Electricity,	1	21,000	18,000	22,000	80
Coal Brook, Wilcox,	Tunnel,	Non-gas.,	Fan,	17 b	4	5	75	1.6	Guibal,	Electricity,	1	19,000	16,000	21,000	75
Coal Brook, Wilson Creek,	Tunnel,			20.5 d	5	6	90	1.9		Steam,	5	92,000	90,000	93,000	250
Coal Brook No. 1, Top Vein,	Tunnel,			17 e	4	5	75	1.6		Electricity,	1	22,000	20,000	23,000	50
Coal Brook No. 1, Pattens,	Tunnel,			20.5 d	5	6	90	1.9		Steam,	2	31,000	30,000	35,000	80
Coal Brook No. 2, Pattens,	Tunnel,			20.5 d	5	6	90	1.9		Steam,	1	28,000	25,000	29,000	50
Coal Brook No. 3, Pattens,	Tunnel,			12 f	3	4	75	1.2		Electricity,	1	27,000	24,000	28,000	60
Clinton Colliery:															
Clinton, North Klondike,	Tunnel,			10	3	3	112	.6			1	29,000	26,000	30,000	70
Clinton, South Klondike,	Tunnel,			10	3	3	112	.5			1	32,000	27,000	32,000	75
Clinton, River Side,	Slope,	Non-gas.,	Fan,	20	5	6	75	1.4	Guibal,	Steam,	3	70,000	60,000	72,000	150
Clinton, Long Slope,	Slope,			17	4	5	110	1.6			4	72,000	65,000	75,000	175
Clinton, Grassy Vein,	Slope,			20	5	6	60	.9			2	58,000	52,000	60,000	168

*There are six fans at Coal Brook—a-b-c-d-e-f.

Powderly Colliery:															
Powderly,	Drift,		Natural,								2	22,000	19,000	29,000	100
Powderly,	Tunnel,	Non-gas.,	Natural,								1	20,000	16,000	21,000	75
Powderly,	Slope,		Fan,	17	4	5	64	.5	Guibal,	Steam,	4	55,000	50,000	57,000	178
Carbondale No. 1 Colliery:															
Carbondale No. 1,	Tunnel,	Non-gas.,	Fans,	5	4	4	240	.4	Guibal,	Electricity,	5	120,000	110,000	125,000	230
				10	3	3	120	.5							
Carbondale No. 1,	Slope,	Non-gas.,	Fan,	10	3	3	160	.8			2	22,000	18,000	24,000	95
Jermyn Colliery:															
Jermyn,	Shaft,	Non-gas.,	Fans,	20	5	6	78	1.5	Guibal,	Steam,	10	225,000	180,000	260,000	583
				17	5	6	75	.8							
White Oak Colliery:															
White Oak No. 11,	Tunnel,	Non-gas.,	Fan,	17	5	5	90	1.6	Guibal,	Steam,		95,000	70,000	98,000	357
White Oak No. 7,			Natural,									26,000	12,000	28,000	95
White Oak No. 6,			Furnace,									11,300	9,200	12,000	50
Hillside Coal and Iron Co.															
Forest City Colliery:															
Forest City No. 2,	Shaft,		Fan,	24	7	7	65	1.0			7	127,000	115,000	135,000	516
Forest City,	Slope,		Fan,	14	6	5	70	.7			1	25,000	20,000	26,000	100
Clifford Colliery:															
Clifford,	Shaft,	Non-gas.,	Fan,	18	5	5	80	1.0	Guibal,	Steam,	5	78,000	70,000	79,000	325
Erie Colliery:															
Erie,	Shaft,		Fans,	12	4	4	85	.6			5	100,000	80,000	100,000	304
				24	6	5	75	.8							
Glenwood Colliery:															
Glenwood,†	Shaft,		Fan,	18	5	5	80	.5			3	40,000	30,000	45,000	174
Scranton Coal Co.															
Raymond Colliery:															
Raymond,	Shaft,		Fan,	18	5	5	75	1.0			2	74,000	68,000	80,000	278
Raymond No. 3,	Slope,		Fan,	14	6	5	85	.75			2	46,000	41,000	59,000	80
Raymond No. 2,	Slope,	Non-gas.,	Natural,						Guibal,	Steam,	1	12,000	10,000	14,000	40
Raymond, Japan,	Drift,		Fan,	10	3	3	80	.75			1	26,000	22,000	30,000	85
Raymond No. 5,	Drift,		Natural,								1	24,000	20,000	25,000	70
Raymond No. 4,	Slope,		Fan,	14	6	5	80	.75			1	23,000	19,000	26,000	60
Black Diamond Colliery:															
Black Diamond No. 1,	Drift,	Non-gas.,	Fan,	12	4	4	120	.7	Guibal,	Steam,	1	10,000	8,000	12,000	------
Black Diamond No. 2,											1	14,000	12,000	15,000	------
Black Diamond No. 3,											1	16,000	14,000	18,000	------

†Abandoned.

TABLE I—Continued

Names of Operators and Mines	Kind of opening	Gaseous or non-gaseous	Method of ventilation	Diameter of fan in feet and inches	Width of blades in feet and inches	Depth of blades in feet and inches	Number of revolutions per minute	Water gauge developed—in inches	Name of fan	Power used	Number of splits of air currents	Number of cubic feet of air per minute entering the mine at inlet	Total quantity of air per minute circulating in all the splits in cubic feet	Number of cubic feet per minute passing out at outlet	Number of persons employed inside
Riverside Colliery:															
Riverside,	Shaft,	Gaseous,	Fan,	20	4	6	80	.4	Guibal,	Steam,	3	80,000	70,000	85,000	
Northwest Coal Co.															
Northwest Colliery:															
Northwest No. 1,	Slope,	Non-gas.,	Fan,	16-20	4-5	5-6	60-70	1.5	Guibal,	Steam,	5	147,000	135,000	148,000	384
Morss Hill Coal Co.															
Morss Hill Colliery:															
Morss Hill Nos. 1 and 2,	Slope,	Non-gas.,	Fan,	13	3	3	75	.7	Guibal,	Steam,	2	40,000	35,000	42,000	94
Carbondale Coal Co.															
Bolands Colliery:															
Bolands,	Slope,	Non-gas.,	Fan,	6	3	4	75	.1	Guibal,	Steam,	1	15,000	16,000	17,000	56
Humbert Coal Co.															
Sunnyside Colliery:															
Sunnyside No. 1,	Tunnel,	Non-gas.,	Fan,	6	3	4	90	.6	Guibal,	Steam,	1	23,000	16,000	25,000	50
Sunnyside No. 2,	Tunnel,	Non-gas.,	Natural,								1	6,000	4,500	8,000	18
Clinton Falls Coal Co.															
Clinton Falls Colliery:															
Clinton Falls Nos. 1 and 2,	Drifts,	Non-gas.,	Natural,								1	6,000	5,000	7,000	19

Fall Brook Coal Co.															
Murrins Colliery:															
Murrins,	Drift,	Non-gas.,	Natural,								1	8,000	8,000	9,000	9
West Mountain Coal Co.															
West Mountain Colliery:															
West Mountain,	Drift,	Non-gas.,	Natural,								1	6,500	6,000	6,750	35
Archbald Coal Co.															
Tappans Colliery:															
Tappans,	Slope,	Non-gas.,	Natural,								2	24,000	20,000	25,000	38
Spring Hill Coal Co.															
Spring Hill Colliery:															
Spring Hill,	Drift,	Non-gas.,	Fan,	6	3	4	0	.2	Guibal,	Steam,	1	7,000	6,000	8,000	23
Stillwater Coal Co.															
Stillwater Colliery:															
Stillwater,	Drift,	Non-gas.,	Natural,								1	14,000	12,000	14,000	12
Outlook Coal Co.															
Outlook Colliery:															
Outlook,	Drift,	Non-gas.,	Fan,								1	8,500	8,000	9,000	16
Salem Hill Coal Co.															
Bartons Colliery:															
Bartons,	Drift,	Non-gas.,	Fan,	6	3	4	5	.6	Guibal,	Steam,	1	8,500	7,000	9,000	31
Ainsley Coal Co.															
Sunset Colliery:															
Sunset,*	Drift,	Non-gas.,	Natural,								1	3,000	2,500	3,000	7

*New mine.

TABLE 1.—Operators, location of collieries, railroads, etc.

Names of Operators and Collieries	County	Name of General Superintendent	Post Office	Name of Superintendent	Post Office	Railroad to Mine
Delaware and Hudson Co.						
Coal Brook	Lackawanna,	C. C. Rose	Scranton	E. R. Pettebone	Dorranceton	Delaware and Hudson
Clinton	Lackawanna, Wayne,					
Powderly	Lackawanna,					
Carbondale No. 1	Lackawanna,					
Jermyn	Lackawanna,					
White Oak	Lackawanna,					
Hillside Coal and Iron Co.						
Clifford	Susquehanna,	W. W. Inglis	Scranton	E. D. Caryl	Forest City	Erie
Forest City	Susquehanna,					
Erie	Lackawanna,					
Glenwood	Lackawanna,					
Scranton Coal Co.						
Raymond	Lackawanna,	W. L. Allen	Peckville	John Burkeiser	Olyphant	N. Y. O. and W.
Black Diamond						
Riverside						
Northwest Coal Co.						
Northwest	Lackawanna,	F. Hemelright	Jermyn	John White	Carbondale	N. Y. O. and W.
Morss Hill Coal Co.						
Morss Hill	Lackawanna,	George Chiles	Carbondale			Erie
Carbondale Coal Co.						
Bolands	Lackawanna,	John Boland	Dunmore			N. Y. O. and W.
Humbert Coal Co.						
Sunnyside	Lackawanna,	T. Humbert	Peckville			Erie
Archbald Coal Co.						
Tappans	Lackawanna,	James Hughes	Wilkes-Barre			Delaware and Hudson
Fall Brook Coal Co.						
Murrins	Lackawanna,	Frank Murrin	Carbondale			Local Sales

Outlook Coal Co.				
Outlook,	Lackawanna,	J. H. Rittenhouse,	Scranton,	N. Y. O. and W.
Spring Hill Coal Co.				
Spring Hill,	Lackawanna,	John White,	Carbondale,	Delaware and Hudson
West Mountain Coal Co.				
West Mountain,	Lackawanna,	John A. Komara,	Olyphant,	N. Y. O. and W.
Salem Hill Coal Co.				
Bartons,	Lackawanna,	G. N. Gray,	Scranton,	Delaware and Hudson
Clinton Falls Coal Co.				
Clinton Falls,	Wayne,	Henry Berbeck,	Forest City,	N. Y. O. and W.
Stillwater Coal Co.				
Stillwater,	Susquehanna,	V. L. Petersen,	Forest City,	Delaware and Hudson
Ainsley Coal Co.				
Sunset,	Lackawanna,	J. Ainsley,	Jermyn,	N. Y. O. and W.

TABLE 2.—Number of tons of coal mined, number of days worked, number of persons employed, number killed and injured, quantity of powder, dynamite and so-called safety explosives used, etc.

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Explosives: Number of pounds of powder used	Explosives: Number of pounds of dynamite used	Number of horses and mules
Delaware and Hudson Co.												
Coal Brook,	Lackawanna,	452,223	22,779	.....	475,002	224	1,287	5	11	21,560	12,771	87
Clinton,	Lackawanna,	260,238	26,177	2,332	288,747	189	790	....	6	13,809	51,127	92
	Wayne,											
Powderly,	Lackawanna,	335,529	28,548	.....	364,077	205	919	1	4	2,136	5,477	49
Carbondale No. 1,*	Lackawanna,	.....	.....	.....	.....	.....	.....	....	....	3,371	11,647	56
Jermyn,	Lackawanna,	268,418	14,776	3,504	286,698	186	710	2	7	9,004	3,550	55
White Oak,	Lackawanna,	169,599	15,656	2,713	187,968	191	627	....	8	7,438	44,922	52
		1,486,007	107,936	8,549	1,602,492	.....	4,333	8	38	57,318	129,494	391
Washeries:												
Jermyn,	Lackawanna,	174,324	17,009	65	191,398	234	40	....	....	.....	.....	.....
Racket Brook,	Lackawanna,	113,185	15,254	.....	128,439	191	27	....	....	.....	.....	.....
		287,509	32,263	65	319,837	.....	67	....	....	.....	.....	.....
Totals,		1,773,516	140,199	8,614	1,922,329	.....	4,400	8	38	57,318	129,494	391
Hillside Coal and Iron Co.												
Forest City,	Susquehanna,	474,146	41,111	8,248	523,505	262	1,205	3	15	565,700	62,103	94
Clifford,												
Erie,†	Lackawanna,	69,741	20,903	817	91,461	147	412	....	....	101,100	14,352	30
Glenwood,	Lackawanna,	19,273	9,727	.....	29,000	60	259	....	1	26,100	296	25
Totals,		563,160	71,741	9,065	643,966	.....	1,876	3	16	692,900	76,751	149

*Coal prepared at Powderly. There were two non-fatal accidents at Carbondale No. 1, and four at Powderly. The six are marked in Powderly column.
†The production from Erie Washery is included with Erie Colliery. No report of washery given.

Scranton Coal Co.												
Raymond,	Lackawanna,	306,085	32,850	2,022	340,957	223	845	3	1	343,250	87,550	71
Black Diamond,		57,579	3,500	800	61,879	182	217	....	2	127,500	13,600	22
Riverside,		59,744	18,250	520	78,514	199	235	1	1	86,600	2,800	25
Totals,		423,408	54,600	3,342	481,350	------	1,297	4	4	557,350	103,950	118
Northwest Coal Co.												
Northwest,	Lackawanna,	175,891	14,071	734	190,696	269	464	1	3	2[illegible],400	12,610	57
Morss Hill Coal Co.												
Morss Hill,	Lackawanna,	29,585	2,900	9,383	41,868	290	142	....	....	2,100	5,500	16
Carbondale Coal Co.												
Bolands,	Lackawanna,	17,280	2,500	9,467	29,247	285	76	1	1	1,170	5,250	10
Humbert Coal Co.												
Sunnyside,	Lackawanna,	15,873	3,600	42	19,515	80	115	....	....	1,017	188	13
Archbald Coal Co.												
Tappans,	Lackawanna,	11,287	1,440	100	12,827	119	79	....	1	300	1,500	16
Fall Brook Coal Co.												
Murrins,	Lackawanna,	----------	400	8,477	8,877	180	15	....	....	116	----------	3
Outlook Coal Co.												
Outlook,	Lackawanna,	5,181	1,025	88	6,294	95	38	....	....	150	175	2
Spring Hill Coal Co.												
Spring Hill,	Lackawanna,	4,120	750	803	5,673	145	44	1	....	350	675	8
West Mountain Coal Co.												
West Mountain,	Lackawanna,	2,696	730	1,833	5,259	159	49	....	....	325	1,250	9
Salem Hill Coal Co.												
Bartons,	Lackawanna,	2,490	600	687	3,777	84	48	....	....	150	2,100	2
Clinton Falls Coal Co.												
Clinton Falls,	Wayne,	2,900	300	250	3,450	101	29	....	....	200	10	2
Stillwater Coal Co.												
Stillwater,	Susquehanna,	1,681	325	1,128	3,134	46	22	....	....	300	----------	3
Ainsley Coal Co.												
Sunset,	Lackawanna,	350	50	170	570	90	11	....	....	50	[illegible]	2
Grand totals,		3,029,418	295,231	54,183	3,378,832	------	8,705	18	63	1,527,396	331,[illegible]	[illegible]

TABLE 2.—Part 2

Names of Operators	County	Number of Boilers					Locomotives			Number of steam engines of all classes	Total horse power	Number of pumps delivering water to surface	Capacity in gallons per minute	Quantity delivered to surface per minute gallons	Number of electric dynamos	Number of air compressors
		Cylindrical	Horse power	Tubular	Horse power	Total horse power	Steam	Air	Electric							
Delaware and Hudson Co.,	Lackawanna, Wayne,	43	1,229	38	5,750	6,979	10	11	17	125	7,654	34	53,400	12,000	6	6
Hillside Coal and Iron Co.,	Lackawanna, Susquehanna,			48	4,650	4,650	5		17	59	8,620	17	9,600	7,560	6	
Scranton Coal Co.,		11	320	17	1,883	2,203	3		2	38	2,317	9	20,652	10,489	1	2
Northwest Coal Co.,				4	900	900	3			14	1,200				1	
Morss Hill Coal Co.,				2	275	275									1	
Carbondale Coal Co.,				2	150	150				3	100	1	120	75		
Humbert Coal Co.,				3	450	450	1				100					
Archbald Coal Co.,	Lackawanna,	2	90	3	400	400	1			8	508	2	260	90		
Fall Brook Coal Co.,				1	150	150				3	100					
Outlook Coal Co.,				1	150	150				3	95	1	20	15		
Spring Hill Coal Co.,		1	60			60				2	50					
West Mountain Coal Co.,				1	85	85				1	45					
Salem Hill Coal Co.,				1	150	150				3	90					
Clinton Falls Coal Co.,	Wayne,			1	60	60										
Stillwater Coal Co.,	Susquehanna,			2	100	100				2	100	1	150			
Ainsley Coal Co.,	Lackawanna,			1	80	80				2	45					
Totals,		57	1,699	125	15,233	16,932	23	11	36	263	21,024	65	84,202	30,229	15	10

TABLE 3.—Number of each class of employes inside and outside of mines

Names of Operators	County	Inside											Outside									Grand total inside and outside
		Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Doorboys and helpers	Pumpmen	Company men	All other employes	Total inside	Superintendents	Foremen	Blacksmiths and carpenters	Engineers and firemen	Slate pickers (boys)	Slate pickers (men)	Bookkeepers and clerks	All other employes	Total outside	
Delaware and Hudson Co.,	Lackawanna, Wayne,	6	14	....	1,087	1,267	509	119	16	280	108	3,496	....	9	42	102	106	181	14	540	994	4,490
Hillside Coal and Iron Co.,	Susquehanna, Lackawanna,	6	8	....	567	494	119	28	15	87	95	1,419	1	2	29	53	92	15	5	260	457	1,876
Scranton Coal Co.,	Lackawanna,	3	3	1	362	335	117	21	10	.....	85	937	3	3	17	41	119	23	4	150	360	1,297
Northwest Coal Co.,		2	....	....	145	144	44	11	2	18	18	384	1	1	7	8	15	2	2	44	80	464
Morss Hill Coal Co.,		1	....	....	42	32	15	1	1	2	.....	94	1	1	2	2	16	3	1	22	48	142
Carbondale Coal Co.,		1	....	....	20	20	5	2	.....	2	6	56	1	1	2	3	5	2	2	4	20	76
Humbert Coal Co.,		1	1	....	24	21	10	2	.....	9	.....	68	1	1	3	4	11	4	1	22	47	115
Archbald Coal Co.,		1	....	....	12	12	1	.....	2	10	.....	38	1	1	5	9	7	2	2	14	41	79
Fall Brook Coal Co.,		1	....	....	3	3	2	.....	.....	.....	.....	9	.....	.....	.....	1	.....	1	.....	4	6	15
Outlook Coal Co.,		1	....	....	6	6	1	1	.....	1	.....	16	1	1	1	2	3	2	1	11	22	38
Spring Hill Coal Co.,		1	....	....	10	8	3	.....	.....	1	.....	23	1	1	1	2	5	1	2	8	21	44
West Mountain Coal Co.,		1	....	....	15	15	4	.....	.....	.....	.....	35	1	1	2	2	5	.....	1	2	14	49
Salem Hill Coal Co.,		1	....	..	12	12	3	.....	.....	3	.....	31	1	....	1	2	6	.....	1	6	17	48
Clinton Falls Coal Co.,	Wayne,	1	....	....	9	5	3	.....	.....	1	.....	19	....	....	1	1	5	2	1	.....	10	29
Stillwater Coal Co.,	Susquehanna,	1	....	....	5	5	1	.....	.....	.....	.....	12	....	....	1	2	3	.....	.....	4	10	22
Ainsley Coal Co.,	Lackawanna,	1	....	....	2	2	1	.....	.....	1	.....	7	1	....	1	2	.....	.....	.....	.....	4	11
Totals,		29	26	1	2,321	2,381	838	185	46	415	312	6,554	14	22	115	236	398	238	37	1,091	2,151	8,705

TABLE 3.—Part 2

Names of Operators	County	Average Number of Days Worked in Breaker												
		January	February	March	April	May	June	July	August	September	October	November	December	Total
Delaware and Hudson Co.,	Wayne, Lackawanna,	20	15	20	20	21	18	15	9	5	11	24	21	199
Hillside Coal and Iron Co.,	Susquehanna, Lackawanna,	16	19	20	21	15	14	11	9	7	7	8	9	156
Scranton Coal Co.,	Lackawanna,	17	16	19	16	15	17	17	16	17	16	17	18	201
Northwest Coal Co.,	Lackawanna,	19	21	24	22	23	24	24	22	23	20	23	24	269
Morss Hill Coal Co.,	Lackawanna,	23	22	25	24	21	25	26	24	25	24	25	26	290
Carbondale Coal Co.,	Lackawanna,	25	22	25	20	25	24	23	23	22	23	27	26	285
Humbert Coal Co.,	Lackawanna,	10	17	10	12	14	17							80
Archbald Coal Co.,	Lackawanna,	10	19	20	17	12	14	14			4	2	7	119
Fall Brook Coal Co.,	Lackawanna,	19	18	22	10	7	6	6	13	9	22	23	25	180
Outlook Coal Co.,	Lackawanna,	4	12	4	12	9	13	14	8	4	3	5	7	95

Spring Hill Coal Co.,	Lackawanna,	12	6			11	19	20	11	14	10	20	22	145
West Mountain Coal Co.,	Lackawanna,	15	8	8	10	10	18	14	15	12	10	22	17	159
Salem Hill Coal Co.,	Lackawanna,	21	14	14		3	17	15						84
Clinton Falls Coal Co.,	Wayne,	15	10	10				5	5	15	13	14	14	101
Stillwater Coal Co.,	Susquehanna,									6		20	20	46
Ainsley Coal Co.,	Lackawanna,	15	18	20	20							10	7	90

TABLE 4.—Fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Colliery	County	Nature and Cause of Accident in Brief
Jan. 2	Joseph Updike,	American,	Tracklayer,	48	M.	1	3	Riverside,	Lackawanna,	While performing his duties he cut his little finger with an axe, and a few days later lock-jaw resulted. He died January 9.
14	James F. Nolan,	American,	Motor brakeman,	17	S.			Coal Brook,	Lackawanna,	Fatally injured by falling under a loaded car, while unhitching a rope from it. The car was being pulled up from a dip.
Feb. 24	George White,	American,	Miner,	35	M.	1	5	Jermyn,	Lackawanna,	Fatally injured by fall of roof near pillar while starting to drive a cross-cut.
March 9	John Oglosky,	Polish,	Laborer,	40	M.	1	3	Coal Brook,	Lackawanna,	Fatally injured by railroad cars. While cleaning ice from the bottom of an empty railroad car a trip of cars was pushed by a locomotive against the car he was cleaning and he was knocked under the cars. Outside.
30	Vladeck Visotski,	Polish,	Miner,	36	S.			Northwest,	Lackawanna,	Fatally injured by fall of roof near face of pillar he was taking out.
April 3	John Fenton,	American,	Miner,	29	M.	1	3	Coal Brook,	Lackawanna,	Fatally injured by fall of roof while replacing a collar that had been discharged by a blast.
17	Jacob Bolinsky,	Austrian,	Miner,	42	S.			Bolands,	Lackawanna,	Fatally injured by flying coals from a blast in a cross-cut.
June 26	Anthony Kokelis,	Lithuanian,	Laborer,	21	S.			Forest City,	Susquehanna,	Fatally injured by falling off the cage in shaft.
	Frank Kocaski,	Polish,	Laborer,	36	M.	1		Clifford,	Susquehanna,	Fatally injured by fall of roof near face of chamber, while holding his light for miners to look over lines.

July	9	Roland Russler,	American,	Locomotive brakeman.	14				Coal Brook,	Lackawanna,	Fatally injured by mine locomotive. He was riding on the tender (a small car for holding coal for locomotive) when it jumped off the track. He tried to jump off and was thrown under the locomotive. Outside.
		Smith Sekosky,	Polish,	Laborer,	27	S.			Coal Brook,	Lackawanna,	Fatally injured by mine car on heading road near his chamber.
Aug.	5	Paul Scavatic,	Italian,	Laborer,	33	S.			Raymond,	Lackawanna,	Fatally injured by fall of roof near face of counter heading while helping the miner to drill a rock hole in the bottom.
		John Guidubidi,	Italian,	Miner,	34	M.	1	2	Raymond,	Lackawanna,	Fatally injured by fall of roof near face of counter heading while drilling a rock hole in bottom.
Sept.	15	Frank Kiefer,	American,	Driver,	19	S.			Raymond,	Lackawanna,	Skull fractured by being kicked by a mule that he was driving.
	28	John Mushaw,	Russian,	Laborer,	28	M.	1		Spring Hill,	Lackawanna,	Fatally injured by fall of roof near face of chamber. The miner stated he had forbidden the laborer to work under the piece that fell.
Oct.	5	William Romonofski,	Polish,	Laborer,	27	S.			Forest City,	Susquehanna,	Fatally injured by fall of roof near face of working. The miner had fired a blast and he and the laborer were returning to the pillar that was being removed, when the roof fell.
Dec.	6	Walter Cannon,	American,	Laborer,	52	M.	1	4	Powderly,	Lackawanna,	Fatally injured by fall of clay and gravel while assisting to load a car of coal at stripping. Outside.
	13	Stephen Sweda,	American,	Doorboy,	17				Jermyn,	Lackawanna,	Fatally injured by mine motor. He was cleaning the heading road where the motor is used. When last seen alive he was standing near the foot of a plane on the inside end of motor road. The verdict of inquest was "death caused by being run over by a trip of cars not being protected by a head light."

TABLE 5.—Non-fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Colliery	County	Nature and Cause of Accident in Brief
Jan. 8	Thomas Cummings,	American,	Driver,	17	....	Powderly,	Lackawanna,	Foot badly bruised by mine car. While walking alongside the mule he was driving he slipped and fell and the car caught him. Outside.
11	Joseph Schencinski,	Polish,	Laborer,	21	....	Forest City,	Susquehanna,	Thigh fractured by fall of roof while loading a car near face of working.
13	Frank Snee,	American,	Headman,	21	....	Coal Brook,	Lackawanna,	Two fingers cut off by being bumped against a car. He was riding the motor with his hand on bumper.
14	Philip Colabro,	Italian,	Laborer,	23	....	Coal Brook,	Lackawanna,	Leg bruised between empty cars while coupling. Outside.
23	Philip Farber,	American,	Driver,	16	....	Coal Brook,	Lackawanna,	Finger cut off by empty car. While lifting the car on the track it ran back and caught his hand against a drag.
Feb. 4	Fredrick Schwarztranber.	American,	Laborer,	18	....	White Oak,	Lackawanna,	Shoulder fractured. While tipping over an ash car a bolt in the car caught him. Outside.
17	Peter Solomon,	Italian,	Miner,	47	M.	Powderly,	Lackawanna,	Leg fractured by a piece of loose rock sliding from the side of the "gob," near the face of the chamber where he was working.
March 1	James Franey,	American,	Machinist helper,	32	S.	Jermyn,	Lackawanna,	Two ribs fractured by falling off a plank walk. Outside.
4	John Rosena,	Austrian,	Laborer,	37	M.	Clinton,	Lackawanna,	Collar bone broken by empty car while trying to replace it on the track. Outside.
8	Stanley Yavorskie,	Polish,	Laborer,	36	M.	Black Diamond,	Lackawanna,	Injured internally by fall of roof near face of chamber while loading a car.
	James Cawley,	American,	Driver,	18	....	Clinton,	Lackawanna,	Small bone in wrist fractured by being squeezed against a prop by a mule while gathering a trip on main haulage road.

March	9	George Range,	American,	Laborer,	33	S.	White Oak,	Leg fractured by being squeezed between two loaded cars on main haulage road. He was running cars on this date.
	15	Lewis Penavitch,	Lithuanian,	Miner,	32	M.	Forest City,	Skull fractured above the eye by fall of roof while starting to clean a fall on chamber track.
	16	Joseph Casey,	American,	Runner,	19	S.	Powderly,	Head and body bruised by fall of roof in chamber when the miner was not working.
	26	William Tyne,	English,	Miner,	49	M.	Clinton,	Leg fractured and body bruised by fall of roof at face of chamber.
		George Cole,	Irish,	Miner,	52	M.	Coal Brook,	Two ribs fractured by fall of roof while barring down loose coal at face of chamber.
April	15	John Neary,	American,	Laborer,	30	M.	Coal Brook,	Head and body bruised by fall of roof near face of working.
	19	Richard Llewellyn,	Irish,	Miner,	48	S.	Coal Brook,	Arm and hand burned by an explosion of black powder. His mining lamp fell in the keg of powder.
		Joseph Sherbo,	Italian,	Miner,	24	S.	White Oak,	Body and hip bruised by fall of roof, "bell" shape, at face of chamber.
	20	James Herman,	American,	Motorman,	19	S.	Coal Brook,	Nose broken by a lever striking him while assisting to replace a car on the track. On main road inside.
	28	Maurice Hickey,	Irish,	Runner,	34	S.	Glenwood,	Compound fracture of leg by being struck by a piece of a runaway car near the foot of plane. Cone on rope broke.
May	5	W. D. Rierdon,	American,	Headman,	16		Northwest,	Leg fractured by an empty car that he neglected to make safe by blocking. Outside.
	6	Louis Zider,	Austrian,	Miner,	29	S.	Clifford,	Leg fractured by fall of roof near face of chamber while preparing to stand a prop.
	13	John Pillar,	Russian,	Laborer,	28	S.	Coal Brook,	Leg fractured by car. While riding in an empty car on his way home the car ran against a mine locomotive. Outside.
	17	William Scott,	American,	Driver,	17		White Oak,	Back, hips and arms bruised by falling off a mule and being dragged along the ground. Outside.
	18	John H. Schimel,	American,	Foot-boy,	15		White Oak,	Shoulder and side injured by falling under a culm car. He slipped on rail. Outside.
	19	Lawerence Cesrik,	Austrian,	Miner,	30	M.	Clinton,	Back and abdomen injured by fall of roof while starting a cross-cut.
	22	Joseph Cardillo,	Italian,	Miner,	22	M.	White Oak,	Right hand bruised badly by fall of coal while barring loose coal from face of chamber.
	24	William Dadin,	Polish,	Driver,	18	S.	Clifford,	Leg fractured. A loaded car jumped the track and struck an empty car that he was standing by, on passing branch.

TABLE 5—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Colliery	County	Nature and Cause of Accident in Brief
May 27	Leo Kowitosky,	Polish,	Driver boy,	16	S.	Clifford,	Susquehanna,	Index finger cut off by mine car while blocking it, on chamber track.
June 2	Louis Maiklavitz,	Austrian,	Miner,	28	M.	Clinton,	Lackawanna,	Head badly lacerated by fall of roof near face of chamber.
7	James Bennie,	Italian,	Miner,	34	M.	Forest City,	Susquehanna,	Right arm fractured by fall of roof near face of chamber while barring out loose coal.
14	Norman English,	American,	Motorman,	31	M.	Forest City,	Susquehanna,	Two middle fingers cut off by being bumped between two mine cars while reaching down for his glove. Outside.
17	Angelo Genie,	Italian,	Laborer,	22	S.	Riverside,	Lackawanna,	Two ribs fractured by being struck by an empty car near foot of plane.
24	Frank Mail,	Italian,	Laborer,	38	M.	Forest City,	Susquehanna,	Compound fracture of arm by falling off a railroad car that he was running under the breaker. Outside.
July 2	Samuel Langman,	English,	Miner,	47	M.	Jermyn,	Lackawanna,	Hip bruised by fall of top coal near face of chamber.
6	Z. H. Tinklepaugh,	American,	Engineer,	20	S.	Tappans,	Lackawanna,	Compound fracture of right leg by being struck by a block used in tackle while raising a boiler. Outside.
12	Alex. Straugh,	Russian,	Laborer,	35	M.	Forest City,	Susquehanna,	Leg fractured by fall of roof at face of working. While taking out a pillar he neglected to take the piece down.
14	Audnu Fertson,	Polish,	Laborer,	39	M.	Coal Brook,	Lackawanna,	Collar bone fractured by being struck by a railroad car while standing along the track. He did not notice the train approaching. Outside.
27	James Cannon,	American,	Driver,	18	S.	Bolands,	Lackawanna,	Leg fractured by mine car on slope. The car was off the track and while trying to signal the engineer the car struck him.

Aug.	12	Fred Carden,	American,	Driver,	16	S.	Carbondale No. 1,	Lackawanna,	Arm fractured by falling off a mule while taking it to the barn.
	18	John Mattes,	Lithuanian,	Laborer,	35	S.	Forest City,	Susquehanna,	Leg fractured by a piece of roof falling on him at face of chamber. He was assisting the miner to pull the piece down and tried to escape when the piece was falling, but slipped and fell.
	27	Charles Grigerski,	Polish,	Miner,	45	M.	Forest City,	Susquehanna,	Arm fractured by mine car while trying to move the car from face of chamber.
Sept.	10	Simon Dauchuck,	Russian,	Miner,	40	M.	Northwest,	Lackawanna,	Back injured by fall of roof while drilling a hole at face of chamber.
	14	Stephen Kicura,	Russian,	Laborer,	28	M.	Jermyn,	Lackawanna,	Ruptured. While loading a car at face of chamber he slipped and fell.
	16	John Valvin,	Italian,	Miner,	60		Forest City,	Susquehanna,	Face and shoulders burned. While charging a hole for a blast the powder was ignited. He was pushing loose powder in the hole.
	16	Joseph Cecceralla,	Italian,	Laborer,	22	S.	Forest City,	Susquehanna,	Face, shoulders and chest bruised while assisting the miner to charge a hole for a blast. The miner was pushing loose powder in the hole, when the powder ignited.
	22	Anthony Rosof,	Italian,	Laborer,	24	M.	Forest City,	Susquehanna,	Skull fractured above cheek bone. While shoveling coal into car a piece of roof slid down from a pile that had fallen sometime before, and caught him.
Oct.	8	Patrick Crogan,	American,	Driver,	17		Northwest,	Lackawanna,	Injured internally by mine cars on main heading road. While waiting for a loaded trip of cars to pass they became uncoupled, and when the first passed he walked in the way of the others.
	16	William Emmett,	American,	Miner,	29	M.	Coal Brook,	Lackawanna,	Jaw fractured. A piece of roof struck one end of his drill, which caused the other end to fly up against his jaw. He was pulling the piece down at the time.
	20	William Gage,	Lithuanian,	Miner,	38	S.	Black Diamond,	Lackawanna,	Leg fractured by fall of roof while preparing a place for a cross-timber at face of working.
	28	John Peonoski,	Polish,	Laborer,	21	S.	Jermyn,	Lackawanna,	Leg fractured by fall of roof while loading a car at face of chamber.
Nov.	6	James Smith,	American,	Laborer,	51	M.	Clinton,	Lackawanna,	Leg injured so badly that amputation was necessary. He was riding on a loaded car on a plane and was caught. Outside.
	9	Karl Schurtztramer,	American,	Laborer,	19	S.	Raymond,	Lackawanna,	Leg injured so badly that amputation was necessary. Caught between a loaded trip. While trying to uncouple the cars the mine locomotive bumped the trip and he was caught. Outside.

TABLE 5—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Colliery	County	Nature and Cause of Accident in Brief
Nov. 13	Andrew Miserak,	Russian,	Laborer,	32	M.	Jermyn,	Lackawanna,	Leg fractured by fall of roof while loading car at face of chamber.
	Alasandro Mastrimua,	Italian,	Laborer,	21	S.	Jermyn,	Lackawanna,	Injured internally by falling from the top floor of washery to the ground, a distance of about 75 feet. While assisting others to change a sprocket wheel the floor broke and they fell through. Outside.
	Emlyan Kozma,	Russian,	Laborer,	32	M.			
20	Dominick Trimlack,	Italian,	Door-boy,	16	S.	Coal Brook,	Lackawanna,	Two fingers cut off and hand bruised by mine car on heading road. While blocking the car it ran back on his hand.
Dec. 6	Thomas Gangan,	Italian,	Laborer,	26	S.	Powderly,	Lackawanna,	Leg fractured by fall of clay and gravel while loading a car with coal at stripping. The clay and gravel was undermined too far. Outside.
13	Peter Kellar,	German,	Laborer,	23	M.	White Oak,	Lackawanna,	Leg fractured and body bruised by fall of roof near face of heading.
18	Frank Fuik,	American,	Laborer,	24	S.	White Oak,	Lackawanna,	Two ribs fractured by slipping on rail at branch of chamber while traveling homeward.
27	James Holt,	American,	Runner,	27	S.	Carbondale No. 1,	Lackawanna,	Body and legs bruised by car on chamber road. The car tipped over while he was spragging it.
28	Thomas Meddleton,	Irish,	Fireman,	28	M.	Forest City,	Susquehanna,	Leg injured so badly that amputation was necessary. While adjusting a slide he was caught with a conveyor line that is used to carry fuel into the boilers. Outside.

CONDITION OF COLLIERIES

DELAWARE AND HUDSON COMPANY

Coal Brook.—Ventilation, drainage and general condition good.

Clinton.—Ventilation, drainage and general condition good.

Powderly.—Ventilation, drainage and general condition good.

Carbondale No. 1. Ventilation, drainage and general condition good.

Jermyn.—Ventilation, roads and drainage fair; condition as to safety good.

White Oak.—Ventilation and drainage fair; other conditions good.

HILLSIDE COAL AND IRON COMPANY

Forest City—Ventilation and general condition good.

Clifford.—Ventilation and general condition good.

The Clifford Breaker has been abandoned and the coal is prepared at Forest City breaker.

Erie.—Ventilation and general condition are being improved.

Glenwood.—Ventilation and general condition are being improved. The colliery has been abandoned on the outside. The coal from the mine is now prepared at the Erie Colliery.

SCRANTON COAL COMPANY

Raymond.—Ventilation and general condition good.

Black Diamond.—Ventilation and general condition fair.

Riverside.—Ventilation and general condition fair.

NORTHWEST COAL COMPANY

Northwest.—Ventilation in "Mills" vein good, general condition good. Ventilation in "Clark" vein fair; general condition fair.

MORSS HILL COAL COMPANY

Morss Hill.—Ventilation and general condition fair.

CARBONDALE COAL COMPANY

Bolands.—Ventilation and general condition fair.

HUMBERT COAL COMPANY

Sunnyside.—Ventilation and general condition fair.

ARCHBALD COAL COMPANY

Tappans.—Ventilation and general condition fair.

FALL BROOK COAL COMPANY

Murrins.—Ventilation and general condition good.

OUTLOOK COAL COMPANY

Outlook.—Ventilation and general condition fair.

SPRING HILL COAL COMPANY

Spring Hill.—Ventilation and general condition fair.

WEST MOUNTAIN COAL COMPANY

West Mountain.—Ventilation bad; general condition fair.

SALEM HILL COAL COMPANY

Bartons.—Ventilation and general condition bad.

CLINTON FALLS COAL COMPANY

Clinton Falls.—Ventilation and general condition fair.

STILLWATER COAL COMPANY

Stillwater.—Ventilation and general condition fair.

AINSLEY COAL COMPANY

Sunset.—Ventilation and general condition fair.

IMPROVEMENTS

DELAWARE AND HUDSON COMPANY

Coal Brook Colliery.—A tunnel, 330 feet long, was driven to the Dunmore vein, and an air shaft was sunk 50 feet in depth, and 10 x 12 feet in section. The old Midland tunnel was re-opened and re-timbered for a distance of 300 feet. No. 3 Slope in Grassy vein was extended 300 feet. The electric plant was increased by the addition of a 750 K. W. General Electric generator, driven by a 20 x 42-inch and 36x42-inch Hamilton Corliss Cross compound engine. No. 8 outside engine plane was extended 1,000 feet, to deliver coal to the main haulage road, where two additional 30-ton locomotives have been placed to facilitate transportation. Four Wicks boilers have been added to the steam plant.

Clinton Colliery.—A tunnel 400 feet long, and a rock ditch 400 feet long for draining the workings of the colliery into the Wilson Creek drainage, were completed. Installed a pair of Flory 10x12-inch hoisting engines in the Clifford vein, East Side slope.

Powderly Colliery.—The pumping capacity has been increased by the installation of a single Goyne 22x16x36-inch pump, discharging through a 20-inch concreted bore-hole, 150 feet in depth.

Carbondale No. 1 Colliery.—A rock plane 150 feet long was driven from the Bottom vein to the Top vein in No. 4 tunnel, and a rock plane 100 feet long from the Top vein to the surface, for a second opening. An air shaft was sunk from the surface to the Top vein in No. 4 tunnel, 10x10 feet in section, and a 10-foot Buffalo steel fan, driven by an electric motor, was placed at the top of shaft to improve the ventilation. A narrow gauge track, one mile in length, was built to Powderly breaker and equipped with one 14-ton and one 12-ton

locomotive to dispense with the dumping of coal at the chutes and transportation by means of large cars. A pump shaft was sunk 80 feet to the Top split of the Clark vein, where a single Goyne pump 22x16x36 inches was installed at the foot.

Jermyn Colliery. A rock plane 700 feet in length was completed from the Archbald to the Grassy vein. To improve transportation on the inside, a 6-ton electric motor was installed. New hoisting engines with double drums of the Flory type, size 14x20 inches, were placed in the Archbald vein haulage extension and Grassy vein plane. *Outside.* A plane for rock dump was built, operated by a 25 horse power electric motor. To drain the upper veins of the West side workings, a concrete culvert 300 feet long, and an open ditch 350 feet in length were built. A new electric power house, 36x50 feet, was built of brick.

White Oak Colliery.—From the Archbald vein No. 6 tunnel a second opening or tunnel 250 feet long, 7 feet high and 12 feet wide, was driven to the surface, and a new return was driven for the installation of a fan. The rope haulage at the head of No. 8 plane, Dunmore vein, was extended 2,500 feet.

HILLSIDE COAL AND IRON COMPANY

Forest City Colliery.—A rock tunnel was driven 7 by 10 feet in section and 275 feet in length, to serve for a second opening for the "Ring" vein. A new 16-inch bore-hole was put down a depth of 225 feet, located 540 feet east of the shaft, and a 12-inch casing pipe inserted, to get rid of the excess water from the 2nd and 3rd Dunmore veins in rainy seasons. The same kind and size of bore-hole was put down near the Forest City Washery to supply the washery with water from the mine. One new 7½ ton cable reel electric motor was installed for the purpose of increasing the output.

The fan and air shaft at No. 2 Shaft are undergoing extensive repairs which have not yet been completed. A new concrete locomotive house was built, size 45 feet 2 inches x 57 feet 3 inches.

Erie Colliery.—The colliery has been shut down since August on account of extensive repairs to the breaker. The result will be better preparation and a larger output. New shaking screens and patent pickers are being added.

The shaft was overhauled, new buntings and guides placed, also new carriages installed. The East side fan was remodeled and rebuilt entirely on the old foundation.

Glenwood Colliery.—The breaker was abandoned May 3, 1909, and has been torn down, with the exception of the North wing, which will be used for a washery. The coal from the Glenwood mine will be transported underground to the Erie shaft and hoisted to the Erie breaker, where it will be prepared.

HUMBERT COAL COMPANY

Sunnyside Colliery.—Two new drifts were opened to the Dunmore vein. A new breaker is in course of erection, with a capacity of 800 tons per day, to replace the one destroyed by fire July 3, 1909. A new boiler plant has been erected of concrete 120 feet from new breaker.

ARCHBALD COAL COMPANY

Tappans Colliery.—A rock slope has been sunk from the surface to the bottom split of the Dunmore vein, a distance of 350 feet; pitch of slope, 12 degrees. A steam hoist was installed for empties from breaker to slope; engine cylinders 12x16 inches. A second opening shaft, 10x10 feet, located 150 feet west of the above slope was sunk from the surface to the bottom split of the Dunmore vein, a distance of 40 feet. On this shaft was erected a Guibal fan 16 feet in diameter, driven direct by a 12x16 inch cylinder horizontal engine.

The old shaft to the Archbald vein was re-opened and continued down to the botttom split of the Dunmore vein; depth of shaft from surface, 125 feet; dimensions 12x18 feet in the clear. The head frame was completed and a steam hoist installed; engine cylinders 14x20 inches. A new boiler house, 34x34 feet, was erected, and two new high pressure boilers installed, equal to 300 horse power. An empty car hoist was built near the foot of the breaker plane, length 72 feet, gradient 18 degrees, to convey by gravity the empty cars from top of hoist to head of Dunmore slope. Erected an engine house, 22x22 feet, erected at the shaft, and a slope engine house, 18x20 feet.

PROSECUTIONS FOR VIOLATIONS OF THE MINING LAWS

Case of
The Commonwealth
Versus
James B. Murrin, et al.

Upon hearing of the intention of James B. Murrin and others associated with him, who were operating a coal mine and breaker in Fell Township, Lackawanna County, to erect a new boiler within 25 feet of the breaker, I notified the parties not to erect a boiler within 100 feet of the breaker. I was advised, however, that the parties, having consulted counsel in the matter, had decided to erect a boiler regardless of my objections.

The correspondence in the case is given herewith, together with the action of the court.

To the Honorable, the Judges of the Said Court:

Your Orator complains and says:

1. Your Orator is Inspector of Mines for the First Anthracite Inspection District of State of Pennsylania. The defendants are residents of County of Lackawanna, said State.

2. The defendant, James B. Murrin, Mary Murrin, Joseph S. Murrin, Frank D. Murrin, Katherine L. Murrin, John Murrin and Annie Murrin, own and operate a certain anthracite coal mine and breaker, situate in Fell Township, County of Lackawanna, State of Pennsylvania, and within the First Anthracite Inspection District.

3. For a long period of time, to wit, twenty-five years, said colliery has been operated by the defendants and their predecessor in title,

John Murrin, their father, by means of a certain mine opening, called a drift, and a certain breaker, certain boilers and divers other machinery.

4. At the time of the passage of the Act of the 2nd day of June, A. D. 1891, P. L. 176, and at the present time, for the purpose of operating said colliery a certain boiler has been and is located within one hundred feet of (to wit, directly adjoining) a certain breaker in which persons are employed in the preparation of coal.

5. Said defendants have begun to erect a new and different boiler on another and different foundation at a certain distance within twenty-five feet of said breaker to replace the boiler heretofore mentioned for the operation of the colliery aforesaid.

6. Your Orator notified said defendants to desist from the erection of said boiler within one hundred feet of said breaker, and on the 4th day of September, A. D. 1909, said defendants notified your Orator that they were advised by counsel that the erection of said boiler is not contrary to law and that they intended to disregard the notice of your Orator.

7. Thereafter, to wit, 11th day of September, A. D. 1909, your Orator notified said defendants that the erection of said boiler was in contravention of the Act of Assembly of June 2, A. D. 1891, hereinbefore referred to and notified said defendants in writing, to wit, then and there that your Orator as Inspector of Mines for the First Anthracite Inspection District of the Commonwealth of Pennsylvania on behalf of said Commonwealth would apply to the proper court for an injunction to prevent them from erecting said boiler.

Your Orator says that the erection of said boiler is contrary to the provisions of the Act of the Commonwealth of Pennsylvania, approved 2nd day of June, A. D. 1891, P. L. 176, and the Supplements thereto, particularly section 2nd, Article 5th, of said act of Assembly.

Your Orator therefore prays:

A. That your Honorable Court award an injunction preliminary until final hearing and afterwards permanent restraining said defendants, James B. Murrin, Mary Murrin, Joseph S. Murrin, Frank D. Murrin, Katherine L. Murrin, John Murrin and Annie Murrin, from erecting and attempting to erect any boiler within one hundred feet of their coal breaker situate in the Township of Fell, County of Lackawanna and State of Pennsylvania.

B. That your Honorable Court award an injunction preliminary until final hearing and thereafter perpetual restraining said defendants from operating said coal breaker within one hundred feet of any boiler erected on any foundation within said distance constructed subsequent to the Act of the General Assembly, 2nd day of June, A. D. 1891.

C. That your Honorable Court grant such other and further relief as the nature of the case may require.

O'BRIEN & KELLY,
Solicitors for Complainant.

We certify that the complainant has no adequate remedy at law and that there is not time to print this bill.

O'BRIEN & KELLY,
Solicitors for Complainant.

State of Pennsylvania, }
County of Lackawanna. } ss.

Before me, the subscriber, a Notary Public in and for said state and county personally appeared P. J. Moore, who being duly sworn according to law deposes and says that he is Inspector for the First Anthracite Inspection District of the Commonwealth of Pennsylvania, and the complainant mentioned in the foregoing bill of complaint, and that the facts set forth in the foregoing bill of complaint are true so far as set forth on knowledge and so far as set forth on information he believes them to be true.

Sworn and subscribed before me
this day of September, A. D., 1909.

.....
.....

AFFIDAVIT FOR INJUNCTION

Lackawanna County, ss.:

P. J. Moore being duly sworn according to law deposes and says:

1. I am Inspector of Mines for the First Anthracite Inspection District of Pennsylvania.

2. James B. Murrin, Mary Murrin, Joseph S. Murrin, Frank D. Murrin, Katherine L. Murrin, John Murrin and Annie Murrin, the defendants, owners and operators of a certain coal mine and breaker in the Township of Fell, County of Lackawanna, said State, within the limits of the First Anthracite Inspection District, have begun to erect a certain boiler at a certain distance within one hundred feet of said coal breaker, and in said coal breaker persons are employed in the preparation of coal.

3. I notified said defendants through their agent and manager, Frank Murrin, that said action was contrary to law, and that they should desist from the same.

4. On 4th day of September, 1909, said defendants by said Manager and Agent delivered to me a certain writing, a copy whereof is hereunto annexed, referred to and made a part hereof, as Exhibit A, wherein as therein more particularly set forth they notified me that they had decided to disregard my notice and erect a certain new boiler within one hundred feet of said breaker on a new and different foundation from that on which the present boiler is erected.

5. On 11th day of September, A. D. 1909, I delivered to said defendants by their said agent and manager, Frank Murrin, a certain writing, a copy whereof is hereunto annexed, referred to as Exhibit B, and made a part hereof, wherein I again notified said defendants that said action was contrary to law, and that as Inspector of Mines for the First Anthracite Inspection District of Pennsylvania I should apply to the proper court for an injunction to restrain said defendants from so doing.

Further your deponent saith not.

Sworn and subscribed before me
this day of Sept., A. D. 1909,

.....
.....

EXHIBIT A

John Murrin, Owner. Frank Murrin, Manager.

Fall Brook Colliery.

Carbondale, Pa., September 4th, 1909.

Mr. P. J. Moore, Mine Inspector,
78 Eighth Avenue, Carbondale, Pa.

My Dear Sir: We have decided regardless of your notice and warning to erect a new boiler plant inside the 100 feet prescribed by law and not on the old foundations. Counsel has assured us that it is within our rights, as the Act of 1891 does not apply to breakers or boilers erected prior to that date.

Very truly yours,

ESTATE OF JOHN MURRIN,
By Frank Murrin, Manager.

EXHIBIT B

Commonwealth of Pennsylvania,
First Anthracite Inspection District,
P. J. Moore, Inspector,
Carbondale, Pa. September 11, 1909.

Mr. Frank Murrin,

Manager Fall Brook Colliery, John Murrin Estate,
Carbondale, Pa.

Dear Sir: Replying to your letter of the 4th instant I wish respectfully to state that your decision to erect a new boiler plant on a new foundation and nearer than one hundred (100) feet to your coal breaker is in contravention of the provisions of Section 2, of Article 5, of the mine Act approved June 2, 1891.

As Inspector of Mines in the First Anthracite District, acting in behalf of the Commonwealth of Pennsylvania, I herewith give you notice of my intention to apply to the court of Lackawanna County for an injunction to prohibit the working of your mine or colliery with a new boiler plant erected nearer than one hundred (100) feet to your coal breaker.

Yours very respectfully,

P. J. MOORE, Mine Inspector.

In the Court of Common Pleas of Lackawanna County.

No. 16 September Term, 1909.

In Equity.

Commonwealth of Pennsylvania Ex Rel. P. J. Moore, Mine Inspector,
vs. James B. Murrin, et al.

Rule for Preliminary Injunction

Injunction—Mining Operations—Breakers—Location of Boilers—Interpretation of Act of June 2, 1891, P. L. 176.

Where a breaker has been erected and in operation prior to the passage of the Act of June 2, 1891, P. L. 176, and a boiler for generating steam was set up alongside it, a new boiler may be installed on a new and different foundation though only twenty-five feet away from the breaker notwithstanding the words of the Act of June 2, 1891, which provide as follows:—"It shall not be lawful to place any boiler or boilers for the purpose of generating steam, under or nearer than one hundred feet to any coal breaker or other structure in which persons are employed in the preparation of coal: Provided, that this section shall not apply to boilers or breakers already erected."

Section 2, Article V of the Act interpreted.

Messrs. O'Brien, Kelly & Fitzgerald, for plaintiff.

Mr. J. B. Murrin, for defendants.

Opinion by E. C. Newcomb, A. L. J., September 24, 1909.

The defendants are coal operators in Fell township. The relator is the state inspector of mines in whose subdivision of the second anthracite inspection district defendants' colliery is located. Under section 2, article V, of the act of 2d June, 1891, P. L. 176, he filed a bill to test the defendants' right to relocate the steam boiler used in their mining operations. At the same time he moved for a special injunction, and a rule to show cause was accordingly granted.

The hearing developed no disputed question of fact. On the contrary the parties agreed of record that the allegations of the bill are true. That reduces the controversy to a single question of law, namely, the construction of one clause of the statute. The section is as follows:

"It shall not be lawful to place any boiler or boilers for the purpose of generating steam, under or nearer than one hundred feet to any coal breaker or other structure in which persons are employed in the preparation of coal: Provided, that this section shall not apply to boilers or breakers already erected."

The defendants' colliery was equipped with a breaker for the preparation of coal. The breaker was erected and in operation before the act was passed. The boiler had been set up alongside the breaker and has continued so ever since. Having occasion to install a new boiler the defendants now propose to locate it on a new and different foundation, but within twenty-five feet of the breaker.

The question is whether that is within the prohibition of the act, or is excepted by the proviso.

Such cases as have risen under the act throw little, if any, light on this particular question, which so far as we can find has never been considered. It must be decided, therefore, on first impression. Yet it is apparently free from difficulty. The language of the proviso is very simple and its meaning and effect appear to be plain.

If it mentioned boilers only, its most obvious meaning would be that as then located though within less than a hundred feet from the

breaker, they were not to be interfered with by the act. In that case an attempt to relocate the boiler within that distance might appear to be against the statute and so might be restrained. It must be assumed, however, that the further words "or breaker" were intended to widen the scope of the exception. As such their effect is to except from the operation of the act not only boilers and breakers already erected. If the breaker be excepted it necessarily draws to it, so to speak, the right to have the boiler located wherever the operator chooses. This view might not be so obvious if the words used were "boilers *and* breakers." But they are used disjunctively. Hence the question here is precisely the same as if boilers were not mentioned at all in the proviso. Taking that out there would remain a plain and unequivocal exception from the act of such breakers as were then in operation, and that is the conclusion to which we are led in this instance. On the facts before us the breaker stands as though no such act had ever been passed. For that reason no case is presented for a preliminary injunction and the rule to show cause is discharged.



SECOND DISTRICT

LACKAWANNA COUNTY

Scranton, Pa., February 23, 1910.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor of transmitting herewith my annual report of the Second Anthracite District, for the year ending December 31, 1909.

Respectfully submitted,

L. M. EVANS. Inspector.

7—23—1909

SUMMARY OF STATISTICS

Number of collieries,	14
Number of mines,	35
Number of mines in operation,	31
Number of tons of coal shipped to market,	3,705,600
Number of tons used at mines for steam and heat,	409,201
Number of tons sold to local trade and used by employes,	58,642
Number of tons produced,	4,173,443
Number of tons produced by electrical machines,	———
Number of tons produced by compressed air machines,	———
Number of persons employed inside of mines,	9,163
Number of persons employed outside,	2,839
Number of fatal accidents inside of mines,	34
Number of fatal accidents outside,	2
Number of non-fatal accidents inside of mines,	51
Number of non-fatal accidents outside,	9
Number of tons of coal produced per fatal accident inside,	122,748
Number of persons employed per fatal accident inside,	269
Number of persons employed per fatal accident outside,	1,419
Number of persons employed per non-fatal accident inside,	179
Number of persons employed per non-fatal accident outside,	315
Number of wives made widows,	24
Number of children made orphans,	51
Number of steam locomotives used inside of mines,	4
Number of steam locomotives used outside,	32
Number of compressed air locomotives used inside,	18
Number of compressed air locomotives used outside,	29
Number of electric motors used inside,	30
Number of electric motors used outside,	———
Number of fans in use,	32
Number of furnaces in use,	———
Number of gaseous mines in operation,	17
Number of non-gaseous mines in operation,	14
Number of old mines abandoned,	———
Number of new mines opened,	———

TABLE A

PRODUCTION OF COAL

Names of Operators	Tons
Delaware and Hudson Company,	1,398,446
Scranton Coal Company,	1,000,817
Temple Iron Company,	829,732
Delaware, Lackawanna and Western Railroad Company,	456,847
Dolph Coal Company,	172,609
Mount Jessup Coal Company,	168,416
Moosic Mountain Coal Company,	134,270
Blakely Coal Company,	12,306
Total,	4,173,443

Production by Counties

Lackawanna,	4,173,443

TABLE B.—Fatal and non-fatal accidents inside and outside of mines; number of tons of coal produced per accident; number of persons employed; number employed per accident

Names of Operators	Fatal Accidents			Non-Fatal Accidents			Tons of coal produced per fatal accident inside	Tons of coal produced per non-fatal accident inside	Number of employes inside	Number of employes outside	Total number of employes	Number of employes inside per fatal accident	Number of employes outside per fatal accident	Number of employes inside per non-fatal accident	Number of employes outside per non-fatal accident
	Inside	Outside	Total	Inside	Outside	Total									
Delaware and Hudson Co.,	11	1	12	24	5	29	127,131	58,268	3,118	802	3,920	283	802	129	160
Scranton Coal Co.,	9	.....	9	7	1	8	111,201	142,973	2,111	837	2,948	234	.....	301	837
Temple Iron Co.,	6	.....	6	4	1	5	138,288	207,433	1,622	481	2,103	270	.....	405	481
Delaware, Lackawanna and Western Railroad Co.,	6	.....	6	6	.....	6	76,141	76,141	1,335	219	1,554	222	.....	222	.....
Dolph Coal Co.,	.....	.....	.....	5	1	6	.....	34,521	334	217	551	.....	.....	66	217
Mount Jessup Coal Co.,	1	.....	1	.....	.....	.....	168,416	.....	281	212	493	281	.....	.....	.....
Moosic Mountain Coal Co.,	1	1	2	4	1	5	134,270	33,567	344	60	404	344	60	86	60
Blakely Coal Co.,	.....	.....	.....	1	.....	1	.....	12,306	18	11	29	.....	.....	18	.....
Totals and averages for district,	34	2	36	51	9	60	122,748	81,832	9,163	2,839	12,002	269	1,419	179	315

TABLE C.—Classification of Fatal Accidents Inside and Outside of Mines

	Months													
	January	February	March	April	May	June	July	August	September	October	November	December	Totals	Percentages
Causes of Accidents Inside														
Falls of coal,						1							1	2.94
Falls of roof,	1	2	3	5	3		1	1	2	1	1	1	21	61.76
Mine cars,									2		1		3	8.82
Explosions of gas,									1				1	2.94
Blasts, premature and otherwise,	1					1			1			1	4	11.77
Falling into shafts,							2	1			1		4	11.77
Totals,	2	2	3	5	3	2	3	2	6	1	3	2	34	100.00
Causes of Accidents Outside														
Cars,					1					1			2	100.00
Totals,					1					1			2	100.00
Grand totals inside and outside,	2	2	3	5	4	2	3	2	6	2	3	2	36	

TABLE D.—Classification of Non-Fatal Accidents Inside and Outside of Mines

	Months													
	January	February	March	April	May	June	July	August	September	October	November	December	Totals	Percentages
Causes of Accidents Inside														
Falls of coal,								1		1	1	1	4	7.84
Falls of roof,	1	1	1	2		6	1	1	4	2			21	41.18
Mine cars,	3		2			1		1	2		4		13	25.49
Explosions of gas,	1								1				2	3.92
Explosions of powder and dynamite,			1										1	1.96
Blasts, premature and otherwise,			1			1	1	1		1			5	9.81
Mules,			1	1			1					2	5	9.80
Totals,	5	1	6	3		8	3	4	7	4	5	5	51	100.00
Causes of Accidents Outside														
Cars					1	2							3	33.33
Machinery,											1		1	11.12
Miscellaneous,	1			1				1	1	1			5	55.55
Totals,	1			1	1	2		1	1	1	1		9	100.00
Grand totals inside and outside,	6	1	6	4	1	10	3	5	8	5	6	5	60	

TABLE E.—Occupations of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Inside													
Miners,	1	1	2	1	1	....	1	....	3	1	....	1	12
Miners' laborers,	1	1	1	4	2	2	....	2	1	....	2	....	16
Drivers and runners,	....	....	....	....	....	....	....	....	1	....	....	1	2
Doorboys and helpers,	....	....	....	....	....	....	....	....	1	....	....	....	1
Company men,	....	....	....	....	....	....	1	....	....	....	....	....	1
Blacksmiths,	....	....	....	....	....	....	1	....	....	....	....	....	1
Headmen,	....	....	....	....	....	....	....	....	....	....	1	....	1
Totals,	2	2	3	5	3	2	3	2	6	1	3	2	34
Outside													
Laborers,	....	....	....	....	1	....	....	....	....	....	....	....	1
Miners,	....	....	....	....	....	....	....	....	....	1	....	....	1
Totals,	....	....	....	....	1	....	....	....	....	1	....	....	2
Grand totals inside and outside,.	2	2	3	5	4	2	3	2	6	2	3	2	36

TABLE F.—Occupations of Persons Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Inside													
Miners,	1	....	3	1	....	5	2	3	6	3	1	3	28
Miners' laborers,	....	1	....	1	....	2	1	1	1	1	1	....	9
Drivers and runners,	2	....	....	....	....	1	....	....	....	....	2	2	7
Doorboys and helpers,	....	....	....	....	....	....	....	....	....	....	1	....	1
Roperiders,	....	....	1	....	....	....	....	....	....	....	....	....	1
Company men,	1	....	....	1	....	....	....	....	....	....	....	....	2
Motormen,	1	....	1	....	....	....	....	....	....	....	....	....	2
Brakemen,	....	....	1	....	....	....	....	....	....	....	....	....	1
Totals,	5	1	6	3	....	8	3	4	7	4	5	5	51
Outside													
Ashmen,	1	....	....	....	....	1	....	....	....	....	....	....	2
Runners,	....	....	....	....	1	....	....	....	....	....	....	....	1
Blacksmiths and carpenters,	....	....	....	....	....	....	....	....	....	1	....	....	1
Laborers,	....	....	....	....	....	1	....	....	....	....	....	....	1
Slatepickers (boys),	....	....	....	1	....	....	....	1	....	....	1	....	3
Dumpers,	....	....	....	....	....	....	....	....	1	....	....	....	1
Totals,	1	....	....	1	1	2	....	1	1	1	1	....	9
Grand totals inside and outside,..	6	1	6	4	1	10	3	5	8	5	6	5	60

TABLE G.—Nationality of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
American,	....	1	....	1	1	....	....	....	1	....	1	....	5
English,	....	....	1	....	1	....	1	....	....	....	....	....	3
Welsh,	....	....	....	....	....	1	1	....	....	....	....	....	2
Irish,	....	....	1	....	....	....	....	....	....	....	....	....	1
German,	....	....	....	....	....	....	1	....	....	....	....	....	1
Polish,	....	....	1	....	....	....	....	2	1	2	....	2	8
Slavonian,	....	....	....	....	2	....	....	....	1	....	1	....	4
Lithuanian,	1	....	....	....	....	....	....	....	1	....	1	....	3
Austrian,	....	....	....	....	....	....	....	....	1	....	....	....	1
Russian,	1	1	....	4	....	1	....	....	1	....	....	....	8
Totals.	2	2	3	5	4	2	3	2	6	2	3	2	36

TABLE H.—Nationality of Persons Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
American,	4	1	3	2	1	1	....	....	....	1	3	1	17
English,	....	....	....	....	....	2	....	....	1	....	....	1	4
Welsh,	1	....	2	....	....	....	....	1	1	1	....	....	6
Irish,	....	....	....	....	....	1	....	1	....	....	....	1	3
German,	....	....	....	....	....	....	....	....	1	....	....	....	1
Polish,	....	....	1	....	....	1	1	2	4	2	....	1	12
Italian,	....	....	....	....	....	3	....	1	....	....	1	....	5
Slavonian,	1	....	....	....	....	1	....	....	....	....	2	....	4
Lithuanian,	....	....	....	....	....	....	2	....	....	....	....	1	3
Russian,	....	....	....	2	....	1	....	....	1	1	....	....	5
Totals,	6	1	6	4	1	10	3	5	8	5	6	5	60

TABLE I.—Operators and mines, kind of openings, type and size of fans, size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents and number of persons employed inside

Names of Operators and Mines	Kind of opening	Gaseous or non-gaseous	Method of ventilation	Diameter of fan in feet and inches	Width of blades in feet and inches	Depth of blades in feet and inches	Number of revolutions per minute	Water gauge developed—In inches	Name of fan	Power used	Number of splits of air currents	Number of cubic feet of air per minute entering the mine at inlet	Total quantity of air per minute circulating in all the splits in cubic feet	Number of cubic feet per minute passing out at outlet	Number of persons employed inside
Delaware and Hudson Co.															
Olyphant Colliery:															
Mines,	Slope,	Gaseous,	Fan,	20	5.00	4.00	85	2.00	Guibal,	Steam,	6	92,520	81,125	110,390	152
Grassy Island No. 1,	Shaft,	Non-gas.,	Fan,	18	5.00	4.00	70	1.50	Guibal,	Steam,	4	71,200	61,200	81,300	181
Grassy Island No. 2,	Shaft,	Gaseous,	†												
Grassy Island No. 2,	Slope,	Non-gas.,	Fan,	28	7.00	8.00	70	3.00	Guibal,	Steam,	9	222,645	199,951	247,578	458
Legitts Creek Colliery:															
Legitts Creek No. 1,	Shaft,	Gaseous,	Fan,	20	6.00	6.00	85	2.6	Guibal,	Steam,	9	190,620	177,660	210,550	371
Legitts Creek No. 3,	Shaft,	Gaseous,	Fan,	22	5.00	5.00	90	4.00	Guibal,	Steam,	7	179,300	153,000	198,900	274
Eddy Creek Colliery:															
Eddy Creek,*	Shaft,	Gaseous,	Fan,												
Olyphant,	Shaft,	Gaseous,	Fan,	22	5.00	5.50	90	2.20	Guibal,	Steam,	7	175,943	122,708	221,626	332
Eddy Creek No. 4,	Drift,	Non-gas.,	Fan,	8	3.00	2.50	125	2.00	Guibal,	Steam,	2	45,000	41,320	52,070	119
Bird's Eye New County Vein,	Drift,	Non-gas.,	Fan,	8	3.00	2.00	200	2.00	Guibal,	Electricity,	2	34,576	36,342	51,590	84
Bird's Eye Clark Vein,	Drift,	Non-gas.,	Fan,	10	3.50	2.00	200	1.00	Guibal,	Electricity,	2	46,802	38,760	55,090	64
Marvine Colliery:															
Marvine, Big and Diamond Vein,	Slope,	Gaseous,	Fan,	20	5.00	5.00	66	1.20	Guibal,	Steam,	6	214,174	201,480	242,190	311
Marvine, Dunmore Nos. 3 and 4 Veins,	Shaft,	Gaseous,	Fan,	22	5.00	5.00	80	1.40	Guibal,	Steam,	7	170,470	146,780	184,830	295

*Not in operation.
†Ventilated by fan at Grassy Island No. 2 Slope.

Scranton Coal Co.															
Johnson Colliery:															
Johnson No. 1,	Shaft,	Gaseous,	Fan,	30	10.00	8.00	55	2.00	Guibal,	Steam,	10	222,900	175,930	223,340	303
Johnson No. 2,	Shaft,	Gaseous,	Fan,	18	5.00	6.00	112	1.60	Guibal,	Steam,	6	93,550	63,800	122,100	226
Johnson No. 3,	Shaft,	Non-gas.,	Fan,	10	3.00	3.00	130	.60	Guibal,	Steam,	2	36,575	30,325	41,575	106
Ontario Colliery:															
Ontario,	Tunnel,	Gaseous,	Fan,	14	4.25	3.50	90	1.00			2	87,000	78,000	93,000	121
Klondyke,	Tunnel,	Gaseous,	Fan,	12	3.25	3.50	90	1.00			3	122,100	103,000	128,500	196
Sturgess,	Shaft,	Non-gas.,	Fan,	20	6.00	6.25	65	1.70	Guibal,	Steam,	6	72,650	65,430	81,120	249
Blue Ridge,	Shaft,	Non-gas.,	Fan,	15	4.50	4.00	80	.50			2	39,200	25,000	45,200	76
Blue Ridge,	Tunnel,	Non-gas.,	Natural,								1	17,300	11,900	27,000	51
Richmond No. 3 Colliery:															
Richmond,	Shaft,	Gaseous,	Fan,	30	10.00	10.00	45	1.30	Guibal,	Steam,	7	138,000	119,800	161,000	289
Temple Iron Co.															
Lackawanna Colliery:															
Lackawanna No. 1,	Shaft,	Gaseous,	Fan,	20	5.00	4.00	85	2.00	Guibal,	Steam,	5	85,045	79,000	91,550	240
Lackawanna No. 4,	Shaft,	Gaseous,	Fan,	22	10.00	8.00	60	2.00	Guibal,	Steam,	7	87,200	71,350	90,800	282
Sterrick Creek Colliery:															
Sterrick Creek,*	Shaft,	Gaseous,	Fan,	25	5.00	5.50									
Sterrick Creek,*	Drift,	Non-gas.,	Fan,	16	4.50	4.50									
Delaware, Lackawanna and Western Railroad Co.															
Storrs Colliery:															
Storrs No. 1,	Shaft,	Gaseous,	Fan,	14	4.00	3.25	108	1.10			9	129,220	113,060	144,740	386
Storrs No. 2,	Shaft,	Gaseous,	Fan,	16	6.00	4.00	126	2.00	Guibal,	Steam,	9	178,679	148,666	195,792	471
Storrs No. 3,	Shaft,	Gaseous,	Fan,	24	8.00	6.00	126	2.00			9	178,679	148,666	195,792	471
Dolph Coal Co.															
Dolph Colliery:															
Hackley,	Slope,	Non-gas.,	Fan,	20	6.00	6.00	60	1.00			1	29,400	20,260	29,410	22
Hannah Bell,	Slope,	Non-gas.,	Fan,	20	5.00	4.00	60	1.00	Guibal,	Steam,	2	65,300	35,370	65,580	91
Clark Vein,	Slope,	Non-gas.,	Fan,	20	5.00	4.00	60	1.00			1	31,750	19,800	31,760	60
Mount Jessup Coal Co.															
Mount Jessup Colliery:															
Peck's,	Shaft,	Gaseous,	Fan,	18	6.00	4.50	85	1.00	Guibal,	Steam,	6	46,200	32,500	51,600	124
Moosic Mountain Coal Co.															
Marshwood Colliery:															
Marshwood,	Drift,	Non-gas.,	Fan,	12	4.00	4.50	75	1.00	Guibal,	Steam,	4	96,750	73,100	102,000	344
Blakely Coal Co.															
Blakely Colliery:															
Blakely,	Slope,	Non-gas.,	Natural,												18

*Not in operation.

TABLE 1.—Operators, location of collieries, railroads, etc.

Names of Operators and Collieries	County	Name of General Superintendent	Post Office	Name of Superintendent	Post Office	Railroad to Mine
Delaware and Hudson Co. Olyphant, Legitts Creek, Eddy Creek, Marvine,	Lackawanna,	C. C. Rose,	Scranton	E. R. Pettebone,	Dorranceton,	Delaware and Hudson
Scranton Coal Co. Johnson, Ontario, Ontario Washery, Richmond No. 3,	Lackawanna,	W. L. Allen,	Peckville,	*J. K. Berkheiser, Inside, *J. J. Aitken, Outside,	Olyphant, Priceburg,	N. Y. O. and W.
Temple Iron Co. Lackawanna, Sterrick Creek,	Lackawanna,	F. H. Hemelright,	Scranton,	Joseph Reese,	Olyphant,	Erie
Delaware, Lackawanna and Western Railroad Co. Storrs,	Lackawanna,	R. A. Phillips,	Scranton,	Walter Reese,	Scranton,	D., L. and W.
Dolph Coal Co. Dolph,	Lackawanna,	W. G. Robertson,	Scranton,			Erie
Mount Jessup Coal Co. Mount Jessup,	Lackawanna,			John T. Cartwright,	Winton,	D., L. and W.
Moosic Mountain Coal Co. Marshwood,	Lackawanna,	C. P. Ford,	Marshwood,			Erie
Blakely Coal Co. Blakely,	Lackawanna,	B. E. Kingsley,	Olyphant,			†

*Inside and outside Superintendent at each colliery.
†Hauled in wagons to railroad.

TABLE 2.—Number of tons of coal mined, number of days worked, number of persons employed, number killed and injured, quantity of powder, dynamite and so-called safety explosives used, etc.

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Explosives: Number of pounds of powder used	Explosives: Number of pounds of dynamite used	Number of horses and mules
Delaware and Hudson Co.												
Olyphant,	Lackawanna,	492,875	83,942	8,389	585,206	214	1,721	9	11	----------	----------	128
Legitts Creek,		323,052	----------	11,876	334,928	183	900	2	14	19,142	17,445	68
Eddy Creek,		251,400	7,235	15	258,650	167	523	----	----	41,183	12,038	42
Marvine,		187,950	28,717	2,995	219,662	179	776	1	4	11,885	7,864	80
Totals,		1,255,277	119,894	23,275	1,398,446	------	3,920	12	29	72,210	37,347	318
Scranton Coal Co.												
Johnson,	Lackawanna,	368,169	51,301	4,230	423,700	210	1,280	4	2	425,000	79,200	114
Ontario,		276,182	43,000	2,343	321,525	216	1,113	2	4	259,875	146,900	106
Richmond No. 3,		153,669	13,480	5,366	172,515	204	490	3	2	286,875	18,500	43
		798,020	107,781	11,939	917,740	------	2,883	9	8	971,750	244,600	263
Ontario Washery,	Lackawanna,	79,378	3,650	49	83,077	121	65	----	----	----------	----------	----
Totals,		877,398	111,431	11,988	1,000,817	------	2,948	9	8	971,750	244,600	263
Temple Iron Co.												
Lackawanna,	Lackawanna,	375,687	36,500	4,582	416,769	265	1,055	5	3	387,050	157,783	71
Sterrick Creek,		375,479	33,850	3,634	412,963	202	1,048	1	2	393,150	92,108	101
Totals,		751,166	70,350	8,216	829,732	------	2,103	6	5	780,200	249,891	172

TABLE 2—Continued

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Explosives		Number of horses and mules
										Number of pounds of powder used	Number of pounds of dynamite used	
Delaware, Lackawanna and Western Railroad Co.												
Storrs,	Lackawanna,	393,458	58,776	4,613	456,847	200	1,554	6	6	756,650	34,033	107
Dolph Coal Co.												
Dolph,	Lackawanna,	146,566	25,000	1,043	172,609	147	551	....	6	6,970	15,450	46
Mount Jessup Coal Co.												
Mount Jessup,	Lackawanna,	149,614	15,000	3,802	168,416	253	493	1	....	178,600	9,077	40
Moosic Mountain Coal Co.												
Marshwood,	Lackawanna,	123,136	8,000	3,134	134,270	227	404	2	5	124,125	19,500	55
Blakely Coal Co.												
Blakely,	Lackawanna,	8,985	750	2,571	12,306	284	29	....	1	8,050	50	3
Grand totals,		3,705,600	409,201	58,642	4,173,443	------	12,002	36	60	2,898,555	609,951	1,004

TABLE 2.—Part 2.

Names of Operators	County	Number of Boilers					Locomotives			Number of steam engines of all classes	Total horse power	Number of pumps delivering water to surface	Capacity in gallons per minute	Quantity delivered to surface per minute—gallons	Number of electric dynamos	Number of air compressors
		Cylindrical	Horse power	Tubular	Horse power	Total horse power	Steam	Air	Electric							
Delaware and Hudson Co.,	Lackawanna,	100	2,826	33	5,825	8,651	8	29	------	158	10,510	19	24,850	13,500	5	11
Scranton Coal Co.,		25	655	32	3,845	4,500	8	------	5	83	11,582	16	21,320	13,500	6	2
Temple Iron Co.,		----	-------	16	3,860	3,860	9	------	6	35	4,400	13	13,264	6,700	3	2
Delaware, Lackawanna and Western Railroad Co.,		5	625	8	2,400	3,025	5	------	16	29	2,510	2	2,160	1,150	6	----
Dolph Coal Co.,		----	-------	12	2,195	2,195	3	------	3	27	1,280	5	1,500	300	3	3
Mount Jessup Coal Co.,		----	-------	10	1,600	1,600	2	------	------	12	605	4	3,300	1,600	1	----
Moosic Mountain Coal Co.,		----	-------	4	300	300	1	------	------	4	105	2	800	450	1	----
Blakely Coal Co.,		----	-------	3	165	165	------	------	------	3	270	------	------	------	----	----
Totals,		130	4,106	118	20,190	24,296	36	29	30	351	31,262	61	67,194	37,200	25	18

TABLE 3.—Number of each class of employes inside and outside of mines

Names of Operators	County	Inside											Outside									Grand total inside and outside
		Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Doorboys and helpers	Pumpmen	Company men	All other employes	Total inside	Superintendents	Foremen	Blacksmiths and carpenters	Engineers and firemen	Slate pickers (boys)	Slate pickers (men)	Bookkeepers and clerks	All other employes	Total outside	
Delaware and Hudson Co.,	Lackawanna,	7	7	25	1,031	1,129	395	62	20	358	84	3,118	....	9	39	125	111	110	11	397	802	3,920
Scranton Coal Co.,		5	8	10	734	628	316	84	30	.....	296	2,111	4	5	45	105	136	181	7	354	837	2,948
Temple Iron Co.,		5	4	4	558	576	158	52	19	113	133	1,622	2	2	30	31	73	98	5	240	481	2,103
Delaware, Lackawanna and Western Railroad Co.,		4	2	10	451	478	112	30	7	160	81	1,335	....	2	13	28	61	.....	5	110	219	1,554
Dolph Coal Co.,		2	.....	.....	151	102	42	6	2	18	11	334	1	1	19	21	62	36	6	71	217	551
Mount Jessup Coal Co.,		1	2	2	86	99	29	14	7	41	.....	281	1	1	11	23	63	3	2	108	212	493
Moosic Mountain Coal Co.,		1	2	....	148	96	48	12	3	19	15	344	1	1	11	4	.....	.....	1	42	60	404
Blakely Coal Co.,		1	....	....	7	8	2	.....	.....	.....	.....	18	1	....	1	1	4	2	2	.....	11	29
Totals,		26	25	51	3,166	3,116	1,102	260	88	709	620	9,163	10	21	169	338	510	430	39	1,322	2,839	12,002

TABLE 3.--Part 2

Names of Operators	County	Average Number of Days Worked in Breaker												
		January	February	March	April	May	June	July	August	September	October	November	December	Total
Delaware and Hudson Co.,	Lackawanna,	18	13	18	18	20	16	13	10	6	13	21	20	186
Scranton Coal Co.,		19	14	19	18	17	17	18	12	17	18	19	21	210
Temple Iron Co.,		20	23	27	21	22	22	17	18	20	19	12	12	233
Delaware, Lackawanna and Western Railroad Co.,		18	13	20	21	9	------	17	19	17	22	21	23	200
Dolph Coal Co.,		13	13	15	10	12	12	12	12	12	12	12	12	147
Mount Jessup Coal Co.,		21	20	22	19	21	22	20	21	21	21	22	23	253
Moosic Mountain Coal Co.,		19	17	19	14	17	19	18	21	21	20	22	20	227
Blakely Coal Co.,		25	23	26	24	22	25	23	23	18	25	25	25	284

TABLE 4.—Fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Colliery	County	Nature and Cause of Accident in Brief
Jan. 12	Lewis Bunavage,	Lithuanian,	Miner,	27	S.			Marvine,		Fatally injured by premature blast in face of chamber.
22	Thomas Samp,	Russian,	Laborer,	30	M.	1	1	Storrs,		Killed by fall of roof in face of chamber. He went into the face, after firing, before the miner had examined.
Feb. 4	Charles Symonds,	American,	Laborer,	24	M.	1	1	Olyphant,		Killed by fall of bell roof in face of chamber.
20	Joseph Wybnavige,	Russian,	Miner,	34	M.	1	3	Lackawanna,		Killed by fall of bell roof in face of working place.
March 2	Thomas Oliver,	English,	Miner,	29	M.	1	2	Richmond No. 3,		Killed by fall of roof in face of chamber. He neglected to stand props.
16	James Clancy,	Irish,	Miner,	47	M.	1	4	Olyphant,		Killed by fall of roof in face of chamber. They fired a blast, which discharged two props, and they started to work before replacing them.
	Frank Storeski,	Polish,	Laborer,	18	S.					
April 16	Afton Pish,	Russian,	Laborer,	20	M.	1		Ontario,	Lackawanna,	Killed by fall of roof in face of chamber. Pish and his miner had fired a blast and tried to bar down some loose coal, but failed. They were preparing to prop it when it fell. The miner had a rib fractured.
17	Andrew Ruben,	Russian,	Laborer,	20	M.	1	1	Storrs,		Fatally injured by fall of bell roof in face of chamber.
21	Michael Sosnyski,	Russian,	Laborer,	40	M.	1		Olyphant,		Fatally injured by fall of bell roof in face of chamber.
27	Michael Tadloski,	Russian,	Laborer,	18	S.			Olyphant,		Fatally injured by fall of slip rock in face of chamber.
	John Callahan,	American,	Miner,	54	W.		1	Storrs,		Killed by fall of roof in face of chamber while examining after a blast.
May 4	Michael Matteravitz,	American,	Laborer,	22	M.	1		Johnson,		Killed by fall of roof on gangway. He was barring down loose roof and when he heard the roof working he became excited and ran under it.

May	13	Joseph Patenko,	Slavonian,	Laborer,	37	W.		2	Sterrick Creek,		Killed by fall of bell roof in face of chamber.
		John McCormack,	English,	Laborer,	27	S.			Olyphant,		Fatally injured by cars outside. A car became derailed in pushing over a frog; he was riding on the head end and fell under it. Outside.
	21	Michael Danjo,	Slavonian,	Miner,	29	M.	1	6	Olyphant,		Killed by fall of bell roof in face of chamber.
June	10	John Thomas,	Welsh,	Laborer,	34	M.	1	1	Richmond No. 3,		Killed by fall of slip top coal in face of chamber.
	25	John Wolfe,	Russian,	Laborer,	38	M.	1	6	Lackawanna,		Fatally injured by blasting. The miner in the next chamber notified the victim and his miner that he was about to fire on the rib, but they thought they were safe. The shot broke the pillar where they had lost their line. The miner was seriously injured.
July	20	Charles Lewis,	Welsh,	Blacksmith,	66	M.	1		Storrs,	Lackawanna,	Killed by falling into the shaft. They were on the cage repairing the fans on one of the landings and allowed the fans to project into the shaft to work on them. They signaled to lower the cage when the fan engaged the canopy and released it, and when the canopy fell it threw them into the shaft.
		John Hall,	English,	Company man,	43	M.	1	2			
	26	August Rincavige,	German,	Miner,	39	M.	1	5	Legitts Creek,		Killed by fall of bell roof in face of chamber.
Aug.	3	Laduick Shinloski,	Polish,	Laborer,	23	S.			Storrs,		Killed by falling into the shaft while hurrying to get on the cage.
	23	Alex. J. Koomis,	Polish,	Laborer,	24	S.			Olyphant,		Fatally injured by fall of bell roof in face of chamber. He died in the hospital September 30.
Sept.	1	Charles Petarra,	Polish,	Miner,	30	M.	1	1	Lackawanna,		Killed by fall of bell roof in face of chamber.
	3	Michael Kowelski,	Russian,	Door-tender,	67	M.	1	1	Johnson,		Killed by cars at foot of slope. A runaway occurred on the slope and he became excited and ran into it.
	13	John Bath,	American,	Miner,	27	M.	1	3	Marshwood,		Spine injured by fall of bell roof in gangway road where he was taking a skip. Died in hospital October 4.
	15	Sebastian Sabcovitz,	Austrian,	Miner,	35	M.	1		Lackawanna,		Fatally injured by blast fired in the next chamber. He failed to heed the warning given by the miner.
	18	Joseph Sampson,	Lithuanian,	Laborer,	35	M.	1		Olyphant,		Fatally burned by explosion of gas in face of working place. He left a door open and then walked into the face.
	25	John Shestack,	Slavonian,	Driver,	21	S.			Mount Jessup,		Killed by cars on gangway road. He was riding on head end of car and fell under while unhitching.

TABLE 4—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Colliery	County	Nature and Cause of Accident in Brief
Oct. 6	Andrew Granick,	Polish,	Miner,	58	M.	1		Marshwood,		Killed by falling under cars. The gate of a car on which he was riding, opened, and he fell through. Outside,
23	Anthony Zeretski,	Polish,	Miner,	40	M.	1	6	Johnson,		Killed by fall of slip rock in face of chamber.
Nov. 2	John Wargo,	Slavonian,	Laborer,	30	S.			Lackawanna,		Killed by cars near foot of shaft. He was seized with a fit while walking along the haulage and fell under a trip of cars.
17	Bladis Tonatis,	Lithuanian,	Laborer,	25	S.			Richmond No. 3.	Lackawanna,	Killed by fall of slip rock in face of chamber.
24	Adam Weinguard,	American,	Headman,	39	M.	1	3	Legitts Creek,		Killed by falling into shaft. He was putting down props and slipped over.
Dec. 2	Patrick Coats,	Polish,	Driver,	25	M.	1	2	Ontario,		Fatally injured by blasting. The miner that fired the blast was working single. Before firing, he went around the pillar and saw that it was safe to fire, and then went back to light the match. During this time Coats came from another direction and was shot.
20	Frank Ogrodoski,	Polish,	Miner,	23	S.			Johnson,		Killed by fall of slip rock in face of chamber.

TABLE 5.—Non-fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Colliery	County	Nature and Cause of Accident in Brief
Jan. 2	Ray Knapp,	American,	Driver,	17	S.	Richmond No. 3,	Lackawanna,	Leg fractured by cars on gangway road. The car bumped at a head-block.
12	Thomas T. Jones,	Welsh,	Company man,	59	M.	Legitts Creek,		Burned on face and hands by explosion of gas. He was traveling through old works and set off a pocket of gas.
13	Bert Sitgraves,	American,	Ashman,	25	S.	Lackawanna,		Burned on face and hands by hot water. He was drawing ashes in the fire room and some cinders fell into a small pool of water. Outside.
16	Thomas T. Richards,	American,	Motorman,	19	S.	Legitts Creek,		Hip and leg contused by cars on gangway road. He ran his motor too strongly against a standing trip of cars and fell under the motor.
26	Michael Gallagher,	American,	Driver,	17	S.	Olyphant,		Hip fractured by cars on gangway road. The mule turned into the wrong road and pulled the car off.
27	John Lasko,	Slavonian,	Miner,	32	M.	Dolph,		Leg fractured by fall of slip bony, in face of chamber.
Feb. 4	Theodore Meyers,	American,	Laborer,	21	S.	Olyphant,		Seriously injured by fall of bell roof in face of chamber. Another laborer was killed by the same fall.
March 1	Wascip Caliski,	American,	Brakeman,	19	S.	Legitts Creek,		Two ribs fractured by a kick from a mule, while taking down the spreader.
4	John E. Lloyd,	Welsh,	Miner,	29	M.	Legitts Creek,		Burned on face and hands by powder. A spark from his lamp fell into powder.
	David E. Davis,	Welsh,	Miner,	54	M.	Legitts Creek,		Rib fractured by fall of roof in face of chamber.
12	David Thomas,	American,	Rope rider,	18	S.	Storrs,		Leg fractured by a car that became derailed while passing him, on gangway road.

TABLE 5—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Colliery	County	Nature and Cause of Accident in Brief
March 16	Frank Wolka,	Polish,	Miner,	28	S.	Storrs,		Hand lacerated by premature blast. He was tamping a hole with atlas, using an iron bar.
20	Harrison Harris,	American,	Motorman,	20	S.	Legitts Creek,		Legs fractured by cars on gangway road. He lost control of the motor, and in jumping off, fractured both legs.
April 4	John Hartman,	American,	Company man,	52	M.	Olyphant,		Arm fractured by a kick from a mule while going into stall.
23	Joseph Slevenski,	Russian,	Miner,	31	M.	Ontario,		Rib fractured by fall of roof, while assisting miner to stand prop under it.
26	Harry P. Crabb,	American,	Slatepicker,	14	S.	Legitts Creek,		Arm fractured by slipping on chute in breaker. Outside.
30	Polko Chick,	Russian,	Laborer,	31	M.	Lackawanna,		Body injured by fall of roof while assisting miner to stand props under it.
May 21	Harry Stiles,	American,	Runner,	27	S.	Legitts Creek,		Arm dislocated by barring cars at breaker. Outside.
June 2	Toney Peter,	Italian,	Laborer,	19	S.	Marshwood,		Arm fractured by cars in jumping off engine. Outside.
5	David Weiland,	English,	Driver,	17	S.	Dolph,	Lackawanna,	Leg fractured by cars on gangway. A miner fired a shot that started a car.
7	Patrick Rowland,	Irish,	Miner,	55	M.	Sterrick Creek,		Leg fractured by fall of slip rock in face of chamber.
12	Vette Vechengo,	Italian,	Miner,	52	M.	Marshwood,		Leg fractured by fall of slip rock in face of chamber.
16	Frank Yavotski,	Slavonian,	Laborer,	35	M.	Sterrick Creek,		Leg fractured by fall of rock in face of chamber while he was barring it down.
18	Mateno Marconi,	Italian,	Miner,	28	S.	Dolph,		Leg fractured by fall of slip rock in face of chamber.
	Joseph Dickson,	English,	Miner,	57	M.	Marvine,		Arm fractured by fall of slip rock in face of chamber.
20	William Phillips,	American,	Ashman,	46	M.	Legitts Creek,		Leg fractured by cars. While bumping up a car the mule turned on him. Outside.

June	25	Frank Dombosky,	Russian,	Miner,	42	M.	Lackawanna,			Seriously injured by blasting in face of chamber.
	30	Michael Jimon,	Polish,	Laborer,	25	S.	Olyphant,			Back and leg injured by fall of slip rock in face of chamber.
July	14	Michael Moskovitz,	Polish,	Laborer,	35	S.	Storrs,			Leg fractured by fall of roof in face of chamber. The miner had been ordered to take it down.
	27	Joseph Huron,	Lithuanian,	Miner,	34	M.	Richmond No. 3,			Injured about eyes by blasting, in face of chamber. He thought the shot had missed fire and returned too soon.
	29	John Ponkres,	Lithuanian,	Miner,	45	M.	Marvine,			Fingers lacerated by being caught in mule chain. The mule started while he was working on the chain.
Aug.	16	John B. Thomas,	Welsh,	Miner,	42	M.	Olyphant,			Collar bone fractured by fall of coal in face of chamber, while mining out a blast.
	19	John Harkins,	Irish,	Miner,	49	M.	Olyphant,			Collar bone and rib fractured by fall of roof. He started to work under the roof before barring it down.
	20	Chas. Poltvanvia,	Italian,	Miner,	33	M.	Marshwood,			Hand blown off by blasting in face of chamber. He thought the charge had missed fire.
	23	John Harinza,	Polish,	Laborer,	51	S.	Dolph,		Lackawanna.	Arm fractured by cars in face of chamber. He was pushing a car with his hand on side of car, and was squeezed between prop and car.
	31	William Stinposki,	Polish,	Slatepicker,	14	S.	Olyphant,			Leg fractured by falling off a platform while assisting to place belt in breaker. Outside.
Sept.	8	George Herljeck,	Russian,	Dumper,	26	S.	Johnson,			Skull fractured by falling over trestle. He lost his hold by lifting on an empty car. Outside.
	9	Julis Nedeski,	Polish,	Miner,	33	M.	Ontario,			Hips squeezed between rib and car on gangway road. His light went out and he tried to cross ahead of the trip.
	17	Joseph Swinski,	Polish,	Miner,	33	M.	Johnson,			Spine fractured by fall of bell rock in face of chamber.
	18	Richard Lloyd,	Welsh,	Miner,	42	M.	Olyphant,			Burned by an explosion of gas. His laborer left a door standing open, and then went into the face and set off the gas. The laborer was fatally burned.
	21	Michael Trienski,	Polish,	Laborer,	33	M.	Olyphant,			Leg fractured by fall of slip rock in face of chamber.
	22	Constantine Comenski,	German,	Miner,	35	M.	Dolph,			Leg fractured by fall of slip rock in face of chamber while mining out a blast.
	23	Stanley Comages,	Polish,	Miner,	33	M.	Storrs,			Collar bone fractured by cars in face of chamber. The car bumped the block too hard and slewed over onto him.

TABLE 5—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Colliery	County	Nature and Cause of Accident in Brief
Sept. 23	Arthur Burgess,	English,	Miner,	54	S.	Storrs,	Lackawanna,	Hand injured by fall of slip rock in face of chamber. It was necessary to amputate it.
Oct. 6	Chester A. Walker,	American,	Carpenter,	21	S.	Dolph,		Arm broken by a derrick pole falling on him. The chain broke while they were raising it. Outside.
11	James Matthews,	Welsh,	Miner,	24	M.	Legitts Creek,		Leg fractured while running away from a blast.
20	Jacob Krupa,	Polish,	Miner,	33	S.	Blakely,		Rib fractured by fall of coal in face of chamber while mining it out.
22	John Sembrat,	Russian,	Miner,	40	M.	Olyphant,		Ankle fractured by fall of slip rock in face of chamber.
27	Peter Archeslewski,	Polish,	Laborer,	32	M.	Legitts Creek,		Hip dislocated by fall of slip rock in face of chamber.
Nov. 12	Andrew Gasper,	Slavonian,	Laborer,	19	S.	Ontario,		Hand lacerated by cars at face of chamber. The mule started while he was pulling out the block.
13	William Cullington,	American,	Slatepicker,	14	S.	Legitts Creek,		Body and neck lacerated. His clothes caught in a revolving shaft in breaker. Outside.
15	Andrew Gorils,	Slavonian,	Miner,	40	M.	Olyphant,		Foot fractured by fall of slip top coal in face of working place.
16	Peter Casello,	Italian,	Driver,	17	S.	Ontario,		Leg fractured by falling under cars on gangway road while riding on the bumper.
18	Thomas Pugh,	American,	Door-tender,	16	S.	Legitts Creek,		Foot injured while riding on a motor away from his door.
20	Joseph Sheridan,	American,	Driver,	22	S.	Marshwood,		Leg fractured by cars on gangway road. He was sitting along side of track, when a car became derailed.
Dec. 2	Daniel M. Jones,	American,	Runner,	16	S.	Marvine,		Arm fractured by falling off mule's back.

Dec.	8	James Whealder,	English,	Miner,	54	M.	Storrs,	Lackawanna,	Leg fractured by fall of slip rock in face of chamber.
	15	George Zwirblis,	Lithuanian,	Miner,	36	M.	Marvine,		Thigh dislocated by fall of slip in face of chamber.
	17	Kasper Savage,	Polish,	Miner,	40	S.	Legitts Creek,		Shoulder fractured by fall of coal in face of chamber while barring it down.
	21	William Bratty,	Irish,	Driver,	16	S.	Marshwood,		Jaw bone fractured by kick from mule.

CONDITION OF COLLIERIES

DELAWARE AND HUDSON COMPANY

Olyphant.—Safety, ventilation and drainage good.
Legitts Creek.—Safety and ventilation good; drainage fair.
Eddy Creek.—Safety, ventilation and drainage good.
Marvine.—Safety, ventilation and drainage good.

SCRANTON COAL COMPANY

Johnson.—Safety, ventilation and drainage good.
Ontario.—Safety, ventilation and drainage good.
Richmond No. 3.—Safety, ventilation and drainage good.

TEMPLE IRON COMPANY

Lackawanna.—Safety and ventilation good; drainage fair.
Sterrick Creek.—Safety, ventilation and drainage good.
The Sterrick Creek breaker was destroyed by fire October 26.

DELAWARE, LACKAWANNA AND WESTERN RAILROAD COMPANY

Storrs.—Safety, ventilation and drainage good.

DOLPH COAL COMPANY

Dolph.—Safety, ventilation and drainage good.

MOUNT JESSUP COAL COMPANY

Mount Jessup.—Safety, ventilation and drainage good.

MOOSIC MOUNTAIN COAL COMPANY

Marshwood.—Safety good; ventilation and drainage fair.

BLAKELY COAL COMPANY

Blakely.—Safety, ventilation and drainage good.

IMPROVEMENTS

DELAWARE AND HUDSON COMPANY

Olyphant Colliery.—Grassy Island No. 2 Shaft. Rock slope, 7 x 12 feet, from Four Foot to Diamond vein driven 250 feet to completion. Chain hoists were installed in Rock and Dunmore No. 4 veins.

Rock plane 125 feet was driven from Clark to New County vein, for return airway.

Olyphant No. 2 Shaft.—Car hoist, 110 feet long, installed in the Diamond vein, and landing rebuilt.

Rock plane 300 feet from Four Foot to No. 2 vein.

Eddy Creek Colliery.—Tunnel, 500 feet from Diamond to No. 2 vein was completed.

In the Miles Slope, a combined pipe and traveling shaft was sunk 45 feet from surface to Rock vein.

Birds Eye Drifts.—A 12-inch water hole and an 8-inch cable bore hole were drilled 130 feet, and an electric pump installed.

Legitts Creek Colliery.—A new sump completed 600 feet in Four Foot vein; foot of shaft rebuilt in No. 3 Dunmore vein; pumping plant completed in Clark vein. Began grading and driving tunnel from Four Foot vein, for the development of Five Foot vein, north of Legitts Creek fault.

DELAWARE, LACKAWANNA AND WESTERN RAILROAD COMPANY

Storrs Colliery.—Installed a Duplex pump, capacity 3,500 gallons; also a 12-inch column line from pump to surface.

A rock slope, 7x12 feet, driven 700 feet, from Clark vein, is now being completed to No. 2 Dunmore vein.

A tunnel, 7x12 feet, driven 400 feet but not yet completed, through "fault" on the east side of Storrs No. 1 Shaft. Considerable repairs were also made to the breaker.

SCRANTON COAL COMPANY

On the 15th of June a new breaker commenced operations at Johnson Colliery. This was to replace the old breaker, which was considered beyond repair.

MINE FOREMEN'S EXAMINATIONS

The annual examination of applicants for certificates of qualification as Mine Foremen and Assistant Mine Foremen was held in the City Hall, Scranton, June 29 and 30. The Board of Examiners was composed of the following persons: L. M. Evans, Mine Inspector, Scranton; Frank G. Wolfe, Mining Engineer, Scranton; David R. Evans, Miner, Olyphant; William F. Malloy, Miner, Carbondale.

The following persons passed a satisfactory examination and were granted certificates:

Mine Foremen

Edward R. Edwards, Robert L. Taylor, Thomas D. Thomas, John J. Barrett, John Johns, Nathan Dodgson, Hugh Archbald, Thomas J. Kennedy, George Watkins, Joseph Dodgson, John S. Thomas, Patrick A. Walsh, David J. Davies, Sydney Owens, William J. Gilroy, James J. Deeble, David J. Thomas, Richard Bowen, David Bowen, Thomas M. Owens, John Brooks, John Murrin, Frank Murrin.

Assistant Mine Foremen

Richard T. Williams, Frank B. Newlands, John J. Thomas, Frank Bennie, Michael J. Collican, Roy C. Craig, E. W. Searing, Thomas S. Williams, Richard Evans, Jr., Frederick Coyne, Charles F. Beecham, Samuel R. Nichols, Thomas Griffiths, William J. Myrick, Lewis A. Jones, John Richards, John Metters, William J. Evans, John J. Griffiths, Jerry F. Stanton.



THIRD DISTRICT

LACKAWANNA COUNTY

Scranton, Pa., February 8, 1910.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor of transmitting herewith my report as Inspector of Mines for the Third Anthracite District for the year ending December 31, 1909, as required by the Act of April 14, 1903.

Respectfully submitted,

D. T. WILLIAMS, Inspector.

SUMMARY OF STATISTICS

Number of collieries,	20
Number of mines,	24
Number of mines in operation,	24
Number of tons of coal shipped to market,	4,011,940
Number of tons used at mines for steam and heat,	284,772
Number of tons sold to local trade and used by employes,	126,987
Number of tons produced,	4,423,699
Number of tons produced by compressed air machines,	——
Number of tons produced by electrical machines,	——
Number of persons employed inside of mines,	8,130
Number of persons employed outside,	2,250
Number of fatal accidents inside of mines,	44
Number of fatal accidents outside,	1
Number of non-fatal accidents inside of mines,	48
Number of non-fatal accidents outside,	6
Number of tons of coal produced per fatal accident inside,	100,539
Number of persons employed per fatal accident inside,	185
Number of persons employed per fatal accident outside,	2,250
Number of persons employed per non-fatal accident inside,	169
Number of persons employed per non-fatal accident outside,	375
Number of wives made widows,	30
Number of children made orphans,	76
Number of steam locomotives used inside of mines,	1
Number of steam locomotives used outside,	9
Number of compressed air locomotives used inside,	3
Number of compressed air locomotives used outside,	——
Number of electric motors used inside,	25
Number of electric motors used outside,	——
Number of fans in use,	25
Number of furnaces in use,	——
Number of gaseous mines in operation,	14
Number of non-gaseous mines in operation,	10
Number of new mines opened,	——
Number of old mines abandoned,	——

TABLE A

PRODUCTION OF COAL

Names of Operators	Tons
Delaware, Lackawanna and Western Railroad Company,	1,108,251
Pennsylvania Coal Company,	824,302
Price-Pancoast Coal Company,	701,131
Hudson Coal Company,	664,539
Scranton Coal Company,	655,632
Green Ridge Coal Company,	119,111
A. D. and F. M. Spencer Coal Company,	101,787
North End Coal Company,	70,962
Economy Light, Heat and Power Company,	50,000
Carney and Brown Coal Company,	40,333
Nay Aug Coal Company,	37,973
Clearview Coal Company,	26,411
Bulls Head Coal Company,	23,267
Total,	4,423,699

Production by Counties

Lackawanna,	4,423,699

TABLE B.—Fatal and non-fatal accidents inside and outside of mines; number of tons of coal produced per accident; number of persons employed; number employed per accident

Names of Operators	Fatal Accidents			Non-Fatal Accidents			Tons of coal produced per fatal accident inside	Tons of coal produced per non-fatal accident inside	Number of employes inside	Number of employes outside	Total number of employes	Number of employes inside per fatal accident	Number of employes outside per fatal accident	Number of employes inside per non-fatal accident	Number of employes outside per non-fatal accident
	Inside	Outside	Total	Inside	Outside	Total									
Delaware, Lackawanna and Western Railroad Co.,	11		11	11	1	12	100,750	100,750	2,257	546	2,803	205		205	546
Pennsylvania Coal Co.,	9	1	10	14	1	15	91,589	58,879	1,591	370	1,961	177	370	114	370
Price Pancoast Coal Co.,	6		6	6	1	7	116,855	116,855	1,140	327	1,467	190		190	327
Hudson Coal Co.,	5		5	8		8	132,908	83,067	1,078	267	1,345	216		135	
Scranton Coal Co.,	9		9	6	1	7	72,848	109,272	1,302	369	1,671	145		217	369
Green Ridge Coal Co.,				1	1	2		119,111	194	78	272			194	78
A. D. and F. M. Spencer Coal Co.,	1		1				101,787		20	75	95	20			
Carney and Brown Coal Co.,				1		1		40,333	72	32	104			72	
Nay Aug Coal Co.,	1		1		1	1	37,973		197	55	252	197			55
Bulls Head Coal Co.,	2		2	1		1	11,633	23,267	74	28	102	37		74	
Miscellaneous Companies,									205	103	308				
Totals and averages for district,	44	1	45	48	6	54	100,539	92,160	8,130	2,250	10,380	185	2,250	169	275

TABLE C.—Classification of Fatal Accidents Inside and Outside of Mines

	Months													
	January	February	March	April	May	June	July	August	September	October	November	December	Totals	Percentages
Causes of Accidents Inside														
Falls of slate,				1	1								2	4.55
Falls of roof,	2	1	7		3		1		1	2	3	1	21	47.73
Mine cars,	1		2				1		1	1			6	13.63
Explosions of powder and dynamite,			1						1				2	4.55
Blasts, premature and otherwise,		1	1	1	2	1				2		1	9	20.45
Mules,						1							1	2.27
Electricity,								1					1	2.27
Miscellaneous,							1		1				2	4.55
Totals,	3	2	11	2	6	2	3	1	4	5	3	2	44	100.00
Causes of Accidents Outside														
Cars,							1						1	100.00
Totals,							1						1	100.00
Grand totals inside and outside,	3	2	11	2	6	2	4	1	4	5	3	2	45	

TABLE D.—Classification of Non-Fatal Accidents Inside and Outside of Mines

	Months													
	January	February	March	April	May	June	July	August	September	October	November	December	Totals	Percentages
Causes of Accidents Inside														
Falls of coal,							1				1		2	4.17
Falls of slate,												1	1	2.08
Falls of roof,	1	2	4		6		1	1	2		2	2	21	43.75
Mine cars,		3	1	2			2			2			10	20.84
Explosions of gas,							1						1	2.08
Blasts, premature and otherwise,	3	1	1	1	2							1	9	18.75
Miscellaneous,			1			1	1		1				4	8.33
Totals,	4	6	7	3	8	1	6	1	3	2	3	4	48	100.00
Causes of Accidents Outside														
Cars,								1					1	16.66
Machinery,									1		1		2	33.34
Miscellaneous,			1						1		1		3	50.00
Totals,			1					1	2		2		6	100.00
Grand totals inside and outside,	4	6	8	3	8	1	6	2	5	2	5	4	54	

TABLE E.—Occupations of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Inside													
Miners,	1	2	4	1	5				2	3	2	2	22
Miners' laborers,	1		4	1	1	1		1	1	1			11
Drivers and runners,	1		2			1	1		1		1		7
Doorboys and helpers,							1						1
Rock men,							1						1
Company men,										1			1
Masons,			1										1
Totals,	3	2	11	2	6	2	3	1	4	5	3	2	44
Outside													
Drivers,							1						1
Totals,							1						1
Grand totals inside and outside,	3	2	11	2	6	2	4	1	4	5	3	2	45

TABLE F.—Occupations of Persons Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Inside													
Miners,	3	1	4	1	8				1	2	3	1	24
Miners' laborers,	1	2	1				2	1	2			2	11
Drivers and runners,		2	1	1		1	2						7
Doorboys and helpers,		1											1
Rock men,							1						1
Company men,				1			1					1	3
Bell men,			1										1
Totals,	4	6	7	3	8	1	6	1	3	2	3	4	48
Outside													
Slatepickers (boys),									1		1		2
Drivers and runners,			1					1					2
Machinists,									1				1
Laborers,											1		1
Totals			1					1	2		2		6
Grand totals inside and outside,	4	6	8	3	8	1	6	2	5	2	5	4	54

TABLE G.—Nationality of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
American,	1		2				1		1				5
Welsh,		1	1			1							3
Irish,	1		1								2		4
Polish,			2	1	1	1	1	1	2	2			11
Hungarian,			1		1		1		1				4
Slavonian,			2		2		1			1	1		7
Lithuanian,	1	1	1	1						1		1	6
Austrian,			1							1			2
Russian,					1							1	2
Swedish,					1								1
Totals,	3	2	11	2	6	2	4	1	4	5	3	2	45

TABLE H.—Nationality of Persons Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
American,		1		1		1	1		1		1		6
English,					1		1				2		4
Welsh,							1						1
Irish,			1		2						1	1	5
German,			1		1						1		3
Polish,	1		3		2		1	1	1	2		2	13
Hungarian,	1			1			1		1				4
Italian,	1	1			1								3
Slavonian,		1	2	1	1			1					6
Lithuanian,	1	1	1				1						4
Austrian,									1				1
Russian,		2							1			1	4
Totals,	4	6	8	3	8	1	6	2	5	2	5	4	54

TABLE I.—Operators and mines, kind of openings, type and size of fans, size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents and number of persons employed inside

Names of Operators and Mines	Kind of opening	Gaseous or non-gaseous	Method of ventilation	Diameter of fan in feet and inches	Width of blades in feet and inches	Depth of blades in feet and inches	Number of revolutions per minute	Water gauge developed—in inches	Name of fan	Power used	Number of splits of air currents	Number of cubic feet of air per minute entering the mine at inlet	Total quantity of air per minute circulating in all the splits in cubic feet	Number of cubic feet per minute passing out at outlet	Number of persons employed inside
Delaware, Lackawanna and Western Railroad Co.															
Brisbin Colliery:															
Brisbin,	Shaft,	Gaseous,	Fan,	14	4	4	144	1.6	Open running,	Steam,	10	186,420	139,790	215,830	396
Cayuga Colliery:															
Cayuga,	Shaft,	Gaseous,	Fan,	12	3.5	4	148	1.3	Open running,	Steam,	9	108,224	96,204	118,896	360
Diamond Colliery:															
Diamond,	Shaft,	Gaseous,	Fans,	14	4	4	104	1.2	Open running.	Steam,	5	93,942	72,076	195,854	198
				14	4	4	96	1							
Diamond,	Drift,	Non-gas.	Fan,	14	4	4	96	.9	Open running,	Steam,	4	38,280	31,525	42,500	146
Diamond Tripp,	Shaft,	Gaseous,	Fan,	16	6	6.5	104	.8	Open running,	Steam,	7	118,300	99,380	128,100	246
Manville Colliery:															
Manvillle,	Shaft,	Gaseous,	Fans,	20	6	5.5	85	1.5	Guibal,	Steam,	9	287,705	236,550	313,420	373
				20	6	5.5	90								
Pennsylvania Coal Co.															
Pennsylvania No. 1 Colliery:															
No. 1,	Shaft,	Gaseous,	Fan,	17.5	5	4.5	75	.6	Guibal,	Steam,	9	107,786	95,743	112,890	308
No. 2,	Drift,	Non-gas.	Fan,	18	5	4.5	60	.6			6	86,200	72,400	89,700	240
Pennsylvania No. 5 Colliery:															
No. 5,	Shaft,	Gaseous,	Fan,	20	6.5	5	75	1.2			9	144,730	94,590	167,265	222
Gipsy Grove Colliery:															
Gipsy Grove,	Shaft,	Non-gas.	Fan,	18	5	4.5	70	.7			5	65,985	53,290	71,920	192

Price-Pancoast Coal Co.																
Pancoast Colliery:																
Pancoast,	Shaft,	Gaseous,	Fans,	35	9	8.5	53	2.1	Guibal,	Steam,	10	165,410	146,070	184,390	356
				20	4	5	90	2.3	Guibal,	Steam,	11	170,474	151,528	188,272	669
Hudson Coal Co.																
Dickson Colliery:																
Dickson,	Shaft,	Gaseous,	Fans,	20	5	7	78	1.6	Guibal,	Steam,	5	139,100	105,000	165,100	195
				20	5	7	85	1.7	Guibal,	Steam,	7	186,200	171,000	217,000	314
Von Storch Colliery:																
Von Storch,	Slope,	Gaseous,	Fans,	22	5.5	7	85	2.4	Guibal,	Steam,	10	121,510	123,340	128,090	476
				12	3	4									
Scranton Coal Co.																
Pine Brook Colliery:																
Pine Brook,	Shaft,	Gaseous,	Fans,	17	4	4			Guibal,	Steam,	10	213,800	189,900	245,850	510
				17	6	6	102	1.2							
Mount Pleasant Colliery:																
Mount Pleasant (Main),	Shaft,	Gaseous,	Fan,	20	5	5	60	.7	Guibal,	Steam,	9	121,500	112,280	130,000	205
Mount Pleasant (Surface)	Shaft,	Non-gas.	Fan,	14	3	3	114	.9	Guibal,	Steam,	3	41,380	37,410	43,060	103
West Ridge Colliery:																
West Ridge,	Shaft,	Gaseous,	Fan,	20	5	5	68	1.2	Guibal,	Steam,	4	67,500	62,000	95,000	136
Green Ridge Coal Co.																
Green Ridge Colliery:																
Green Ridge,	Slope,	Gaseous,	Fan,	14	4	4	48	2	Open running,	Steam,	6	86,540	72,470	97,600	154
A. D. and F. M. Spencer Coal Co.																
Spencer Colliery:																
Spencer,	Shaft,	Non-gas.	Natural,								1	16,400	12,400	17,300	18
North End Coal Co.																
North End Colliery:																
North End,	Tunnel,	Non-gas.	Natural,								4	26,200	24,200	28,400	88
Carney and Brown Coal Co.																
Carney and Brown Colliery:																
Carney and Brown,	Shaft,	Non-gas.	Natural,								1	13,716	10,108	13,884	23
Nay Aug Coal Co.																
Nay Aug Colliery:																
Nay Aug,	Slope,	Non-gas.	Natural,								3	13,050	10,250	24,850	43
Clearview Coal Co.																
Clearview Colliery:																
Clearview,	Drift,	Non-gas.	Fan,	7	2.5	2	90	.4	Sturdevant,	Electricity,	1	18,232	17,150	24,520	30
Bulls Head Coal Co.																
Bulls Head Colliery:																
Bulls Head,	Slope,	Non-gas.	Natural,								2	30,000	18,000	31,000	44

TABLE 1.—Operators, location of collieries, railroads, etc.

Names of Operators and Collieries	County	Name of General Superintendent	Post Office	Name of Superintendent	Post Office	Railroad to Mine
Delaware, Lackawanna and Western Railroad Co.						
Brisbin,	Lackawanna,	R. A. Phillips,	Scranton,	Walter Reese,	Scranton,	D. L. and W.
Cayuga,				Walter Reese,		
Diamond,				Walter Reese,		
Manville,				Walter Reese,		
Diamond Washery,				George Wethers,		
Cayuga Washery,				George Wethers,		
Pennsylvania Coal Co.						
Pennsylvania No. 1,	Lackawanna,	William W. Inglis,	Dunmore,	A. E. Yetter,	Troop,	Erie
Pennsylvania No. 5,*						
Gipsy Grove,						
Price Pancoast Coal Co.						
Pancoast,	Lackawanna,	John R. Bryden,	Scranton,	Joseph V. Birtley,	Dunmore,	D. L. and W. and O. and W.
Pancoast Washery,						
Hudson Coal Co.						
Dickson,	Lackawanna,	C. C. Rose,	Scranton,	E. R. Pettebone,	Dorranceton,	D. and H.
Von Storch,						
Von Storch Washery,						
Scranton Coal Co.						
Pine Brook,	Lackawanna,	W. L. Allen,	Peckville,	John J. Von Bergen, John F. Cummings,	Scranton,	O. and W.
Mount Pleasant,						
West Ridge,						
Green Ridge Coal Co.						
Green Ridge,	Lackawanna,	W. L. Connell,	Scranton,	A. Widowfield,	Scranton,	Erie
A. D. and F. M. Spencer Coal Co.						
Spencer,	Lackawanna,	F. M. Spencer,	Scranton,	H. M. Spencer,	Dunmore,	Erie / Erie and D. L. and W.
Spencer Washery,						

*Idle since August.

North End Coal Co. North End,	Lackawanna,	W. L. Connell,	Scranton,	A. Widowfield,	Scranton,	O. and W.	
Economy Light, Heat and Power Co. Economy Washery,	Lackawanna,	L. H. Conklin,	Scranton,				
Carney and Brown Coal Co. Carney and Brown,	Lackawanna,	John Carney,	Dunmore,	John Brown,	Dunmore,	D. L. and W.	
Nay Aug Coal Co. Nay Aug,	Lackawanna,	William Y. Moffatt,	Scranton,	William Robertson,	Dunmore,	Erie	
Clearview Coal Co. Clearview,	Lackawanna,	Louis B. Landau,	Scranton,	H. A. Dawson,	Scranton,		
Bulls Head Coal Co. Bulls Head,	Lackawanna,	David Spruks,	Scranton,	Jonathan Vipond,	Scranton,	O. and W.	

TABLE 2.—Number of tons of coal mined, number of days worked, number of persons employed, number killed and injured, quantity of powder, dynamite and so-called safety explosives used, etc.

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Explosives: Number of pounds of powder used	Explosives: Number of pounds of dynamite used	Number of horses and mules
Delaware Lackawanna and Western Railroad Co.												
Brisbin	Lackawanna,	292,598	20,219	4,673	317,490	235	772	2	5	352,750	16,179	58
Cayuga,	Lackawanna,	156,374	13,015	5,899	175,188	230	534	3	----	190,325	24,819	50
Diamond,	Lackawanna,	315,831	9,914	----------	325,745	190	860	5	3	450,375	20,276	114
Manville,	Lackawanna,	140,171	10,955	1,730	153,156	209	572	2	3	376,425	20,271	54
Totals,		905,174	54,103	12,302	971,579	------	2,738	11	11	1,370,375	81,545	276
Washeries:												
Diamond,	Lackawanna,	103,177	9,985	----------	113,162	148	55	----	1	125	----------	3
Cayuga,	Lackawanna,	21,828	1,682	----------	23,510	105	10	----	----	----------	----------	----
		125,005	11,667	----------	136,672	------	65	----	1	125	----------	3
Totals,		1,030,179	65,770	12,302	1,108,251		2,803	11	12	1,370,500	81,545	279
Pennsylvania Coal Co.												
Pennsylvania No. 1,	Lackawanna,	517,279	20,910	4,013	542,202	256	1,050	7	10	576,075	13,851	80
Pennsylvania No. 5,	Lackawanna,	125,863	4,037	8,300	138,200	143	523	1	3	178,025	4,192	42
Gipsy Grove,	Lackawanna,	138,608	5,000	292	143,900	232	388	2	2	913,425	20,123	43
Totals,		781,750	29,947	12,605	824,302	------	1,961	10	15	1,667,525	38,166	165

Price-Pancoast Coal Co.												
Pancoast,	Lackawanna,	566,848	54,750	4,267	625,865	259	1,422	6	7	891,500	15,900	112
Pancoast Washery,		75,266			75,266	138	45					
Totals,		642,114	54,750	4,267	701,131		1,467	6	7	891,500	15,900	112
Hudson Coal Co.												
Dickson,	Lackawanna,	212,802	6,696	4,670	224,168	205	612	2	4	383,100	20,717	59
Von Storch,		232,573		3,360	235,933	195	690	3	4	300,050	16,219	69
		445,375	6,696	8,030	460,101		1,302	5	8	683,150	36,936	128
Von Storch Washery,	Lackawanna,	154,673	49,765		204,438	244	43					
Totals,		600,048	56,461	8,030	664,539		1,345	5	8	683,150	36,936	128
Scranton Coal Co.												
Pine Brook,	Lackawanna,	385,015	25,550	4,890	415,485	205	913	4	3	588,500	26,500	89
Mount Pleasant,		165,635	20,370	2,563	188,568	140	506	3	3	341,250	10,100	51
West Ridge,		40,276	9,250	2,053	51,579	135	252	2	1	121,750	13,800	31
Totals,		590,956	55,170	9,506	655,632		1,671	9	7	1,051,500	50,400	171
Green Ridge Coal Co.												
Green Ridge,	Lackawanna,	78,531	7,065	33,515	119,111	197	272		2	125,350	7,600	35
A. D. and F. M. Spencer Coal Co.												
Spencer,	Lackawanna,	6,368		2,711	9,079	59	30	1		5,625	5,000	5
Spencer Washery,		89,708	3,000		92,708	220	65					3
Totals,		96,076	3,000	2,711	101,787		95	1		5,625	5,000	8
North End Coal Co.												
North End,	Lackawanna,	58,006	9,000	3,956	70,962	195	233			61,875	4,000	18
Economy Light, Heat and Power Co.												
Economy Washery,	Lackawanna,	48,200	1,800		50,000	230	15					
Carney and Brown Coal Co.												
Carney and Brown,	Lackawanna,	30,911	80	9,342	40,333	190	104		1	30,975	1,050	18
Nay Aug Coal Co.												
Nay Aug,	Lackawanna,	27,194	714	10,065	37,973	203	252	1	1	8,950	3,232	36
Clearview Coal Co.												
Clearview,	Lackawanna,	18,314	15	8,082	26,411	196	60			20,625	150	5

TABLE 2—Continued

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Explosives		Number of horses and mules
										Number of pounds of powder used	Number of pounds of dynamite used	
Bulls Head Coal Co., Bulls Head,	Lackawanna,	9,661	1,000	12,606	23,267	214	102	2	1	23,750	970	16
Grand totals,		4,011,940	284,772	126,997	4,423,699	------	10,380	45	54	5,941,325	244,949	991

TABLE 2.—Part 2.

Names of Operators	County	Number of Boilers					Locomotives			Number of steam engines of all classes	Total horse power	Number of pumps delivering water to surface	Capacity in gallons per minute	Quantity delivered to surface per minute—gallons	Number of electric dynamos	Number of air compressors
		Cylindrical	Horse power	Tubular	Horse power	Total horse power	Steam	Air	Electric							
Delaware, Lackawanna and Western Railroad Co.,	Lackawanna,	3	250	19	5,050	5,300	4	.....	11	70	4,851	11	12,339	8,194	1	....
Pennsylvania Coal Co.,		....	.....	15	2,050	2,050	4	.....	.....	44	2,035	3	1,780	650	1	3
Price-Pancoast Coal Co.,		....	.....	11	1,835	1,835	.....	.....	.....	31	1,908	2	1,600	1,000	2	2
Hudson Coal Co.,		....	.....	13	3,000	3,000	.....	3	.....	53	3,453	4	3,500	1,650	....	2
Scranton Coal Co.,		12	180	17	2,470	2,650	2	.....	8	36	3,321	12	8,012	5,850	3	....
Green Ridge Coal Co.,		....	.....	9	1,125	1,125	.....	.....	3	8	594	.....	.....	.....	.....	....
A. D. and F. M. Spencer Coal Co.,		5	145	2	300	445	.....	.....	.....	9	260	.....	.....	.....	.....	....
North End Coal Co.,		....	.....	5	500	500	.....	.....	3	4	225	.....	.....	.....	1	....
Economy Light, Heat and Power Co.,		....	.....	2	600	600	.....	.....	.....	3	40	.....	.....	.....	.....	....
Carney and Brown Coal Co.,		....	.....	3	360	360	.....	.....	.....	5	140	.....	.....	.....	.....	....
Nay Aug Coal Co.,		....	.....	3	675	675	.....	.....	.....	3	253	.....	.....	.....	.....	....
Bulls Head Coal Co.,		3	156	.....	.....	156	.....	.....	.....	4	139	.....	.....	.....	2	....
Totals,		23	731	99	17,965	18,696	10	3	25	270	17,219	32	27,231	17,344	10	7

TABLE 3.—Number of each class of employes inside and outside of mines

Names of Operators	County	Inside											Outside									Grand total inside and outside
		Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Doorboys and helpers	Pumpmen	Company men	All other employes	Total inside	Superintendents	Foremen	Blacksmiths and carpenters	Engineers and firemen	Slate pickers (boys)	Slate pickers (men)	Bookkeepers and clerks	All other employes	Total outside	
Delaware, Lackawanna and Western Railroad Co.,	Lackawanna,	7	2	18	736	796	279	49	14	229	127	2,257	1	6	27	52	132	38	14	281	546	2,803
Pennsylvania Coal Co.,		4	9	3	530	580	176	32	3	188	66	1,591	1	3	18	26	95	45	5	177	370	1,961
Price-Pancoast Coal Co.,		2	3	8	367	361	145	66	7	58	123	1,140	1	2	8	25	64	58	4	165	327	1,467
Hudson Coal Co.,		2	3	11	353	324	175	24	3	160	23	1,078	----	4	18	43	50	19	6	127	267	1,345
Scranton Coal Co.,		4	2	11	426	375	263	40	16	15	150	1,302	3	3	19	26	111	74	4	129	369	1,671
Green Ridge Coal Co.,		1	1	1	62	70	44	5	------	5	5	194	1	1	5	5	21	----	3	42	78	272
A. D. and F. M. Spencer Coal Co.,		1	----	----	7	7	3	------	------	1	1	20	1	1	2	8	6	4	1	52	75	95
North End Coal Co.,		1	----	2	45	47	18	1	------	9	47	170	1	1	4	7	21	10	2	17	63	233
Economy Light, Heat and Power Co.,		----	----	----	----	----	----	------	------	----	----	----	1	1	----	2	----	----	----	11	15	15
Carney and Brown Coal Co.,		1	2	----	20	22	8	------	------	7	12	72	1	1	2	4	9	2	1	12	32	104
Nay Aug Coal Co.,		1	----	----	74	74	27	------	------	15	6	197	1	2	2	11	16	6	2	15	55	252
Clearview Coal Co.,		1	----	----	10	17	4	------	1	1	1	35	2	1	2	----	8	----	2	10	25	60
Bulls Head Coal Co.,		1	----	----	21	21	8	------	------	23	------	74	1	1	2	2	11	1	1	9	28	102
Totals,		26	22	54	2,651	2,694	1,150	217	44	711	561	8,130	15	27	109	211	544	252	45	1,047	2,250	10,380

TABLE 3.—Part 2

Names of Operators	County	Average Number of Days Worked in Breaker												
		January	February	March	April	May	June	July	August	September	October	November	December	Total
Delaware, Lackawanna and Western Railroad Co.,	Lackawanna,	16	13	21	19	19	19	17	16	14	20	21	21	216
Pennsylvania Coal Co.,		18	21	25	21	22	18	15	10	14	14	16	16	210
Price-Pancoast Coal Co.,		21	21	23	20	21	23	22	20	23	22	21	22	259
Hudson Coal Co.,		19	14	18	19	21	17	14	10	11	19	19	19	200
Scranton Coal Co.,		14	13	15	12	13	14	14	14	10	12	14	15	160
Green Ridge Coal Co.,		16	16	18	17	18	17	12	11	17	17	18	20	197
A. D. and F. M. Spencer Coal Co.,		10	8	10	7	4	------	------	2	4	2	4	8	59
North End Coal Co.,		13	11	20	15	16	10	15	18	21	18	17	21	195
Carney and Brown Coal Co.,		16	15	20	18	14	18	16	16	14	13	13	17	190
Nay Aug Coal Co.,		23	22	24	17	18	------	17	21	22	19	19	1	203
Clearview Coal Co.,		22	16	23	12	11	10	9	5	14	23	25	26	196
Bulls Head Coal Co.,		16	17	19	15	17	15	17	18	19	20	19	22	214

TABLE 4.—Fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Colliery	County	Nature and Cause of Accident in Brief
Jan. 5	Alexander Maneka,	Lithuanian,	Miner,	43	M.	1	6	Dickson,		Killed by fall of roof at face of chamber in Clark vein, while drilling a hole in the coal at face.
16	Jacob Ferguson,	Irish,	Laborer,	45	M.	1	5	Pennsylvania No. 1,		Killed by fall of roof at face of chamber. While loading a car a piece of roof that had two seams running at right angles to each other, which could not be detected, fell upon him.
30	Birt Smith,	American,	Driver,	18	S.			Pine Brook,		Killed by being struck on head by mine car. He was running a loaded car out of a chamber and forgot to take off the head-block. The car struck the block and the rear end of it struck him.
Feb. 10	Thomas Evans,	Welsh,	Miner,	58	S.			Cayuga,	Lackawanna,	Killed by flying coal from blast. He had prepared a blast in a cross-cut that he was driving to the chamber on his right, and as he was igniting the squib the charge exploded throwing him back a distance of ten feet.
23	Michael Malonsky,	Lithuanian,	Miner,	40	M.	1	4	Manville,		Killed by fall of roof. He had fired a blast in the bottom rock, which loosened a piece of rock that overhung the props about two feet, and in going back to the face to investigate he walked directly under a piece of roof that fell on him.
March 1	John Koupts,	Lithuanian,	Miner,	37	M.	1	6	Pancoast,		Killed by fall of roof at face of chamber. He fired a blast in the coal that discharged three props, and instead of examining the roof and restanding the discharged props, he began to work under the roof, which fell upon him.

March 1	Joseph Vegzo,	Hungarian,	Laborer,	26	M.	1	2	Gipsy Grove,	Lackawanna,	Killed by fall of soap stone at face of chamber while taking out pillars.
10	Peter Setchock,	Austrian,	Miner,	48	M.	1	3	Nay Aug,		Killed by fall of roof while taking out pillars. He fired a blast and went back to the face to bar down some coal, when a large portion of coal and rock fell upon him.
11	Joseph Modzolefski,	Polish,	Laborer,	28	S.			Pancoast,		Killed by fall of roof at face of chamber. He was working with his brother. They fired a blast, which discharged two props. They had one prop restood, and the victim was cleaning away some coal to restand the other when a piece of roof fell on him.
16	John Sidorski,	Polish,	Driver,	18	S.			Cayuga,		Fatally injured by mine car. He was driving out a loaded car on the gangway road and slipped on a branch rail and fell underneath the car. Died August 23.
	Lafe Doyle,	American,	Mason,	46	M.	1	8	Pancoast,		Fatally injured by mine cars. He was on his way to the sand bed near the foot of the shaft, and when he reached the foot of the engine plane the tail rope trip was going in. When the engineer stopped the trip Doyle's body was found underneath the cars.
18	Peter Pobzer,	Slavonian,	Miner,	40	M.	1		West Ridge,		Killed by an explosion of black powder and dynamite. He was taking the powder to work and sat down to rest, when it exploded.
24	Evan R. Jones,	Welsh,	Miner,	53	M.	1	4	Pine Brook,		Killed by flying coal from blast at face of chamber. He ignited the squib and retreated to a place of safety. Thinking that it had missed fire he went back, and just as he reached the face, the charge exploded.
24	Charles Hart,	American,	Laborer,	22	S.			Diamond,		Killed by fall of roof. While working near the face a piece of roof running to a feather edge over a prop fell upon him.
	Thomas Murphy,	Irish,	Runner,	18	M.	1		Diamond,		Killed by fall of roof. Two miners working in the same chamber fired four blasts which discharged a prop. The roof being very high, they waited for a car to stand on to reset the prop, and just as Murphy brought the car up to the face the roof fell upon him.

TABLE 4—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Colliery	County	Nature and Cause of Accident in Brief
March 24	Ignet Strasconladge,	Slavonian,	Laborer,	22	S.	...	....	Pennsylvania No. 5,	Lackawanna,	Killed by fall of roof at face of chamber. The miner was taking out pillars and had fired a blast. He neglected to pull down some loose material, and while the victim was loading a car a portion of the roof fell upon him.
April 6	Joseph Rynoez,	Lithuanian,	Laborer,	42	M.	1	...	Spencer,		Killed by fall of roof. While going to fill his lamp with oil he walked under a piece of roof that had been loosened by a slight squeeze while robbing pillars and it fell on him.
26	Jacob Barnick,	Polish.	Miner,	31	M.	1	1	Mount Pleasant,		Killed by flying coal from blast at face of chamber. He had prepared a blast and while in the act of igniting the squib he lighted the squib instead of the match and the charge exploded.
May 10	Mike Muserack,	Slavonian,	Miner,	39	M.	1	6	Brisbin,		Killed by fall of roof at face of chamber. While restanding a discharged prop, a false piece of rock running to a feather edge on one side fell upon him.
	Peter Wanda,	Slavonian,	Miner,	32	M.	1	3	Pennsylvania No. 1,		Killed by fall of roof. He was shoveling coal from an airway down to the gangway through a cross-cut, when without warning a fall of roof the whole length and width of the cross-cut fell upon him.
11	Anthony Gluch,	Russian,	Miner,	29	M.	1	1	Diamond,		Killed by fall of roof at face of chamber. While mining out a piece of coal that was left after a blast, a heavy slab of rock in saddle shape located between the bottom and top coal fell upon him.

May	17	Frank Kluber,	Hungarian,	Miner,	40	M.	1	3	Pine Brook,			Fatally injured by fall of bony at face of chamber. He had fired a blast, which did not cut, and he was mining it out when a piece of bony fell upon him. Died May 29.
	21	Walter Gordner,	Polish,	Laborer,	46	M.	1	4	Pennsylvania No. 1,			Killed by flying coal from blast at face of chamber. He and his miner were ramming a cartridge into a hole that was too small, when the charge exploded.
	24	Edward Otth,	Swedish,	Miner,	54	M.	1	4	West Ridge,			Killed by flying coal from blast at face of chamber. He fired one blast and went back to the face to fire another, but before he could get to a place of safety the charge exploded.
June	8	John Barnes,	Polish,	Laborer,	23	S.			Mount Pleasant,			Killed by flying coal from blast at face of chamber while loading a car. When the blast exploded in the cross cut in the adjoining chamber it blew through the pillar and killed him.
	22	Edward Gowar,	Welsh,	Driver,	23	S.			Pancoast,			Fatally injured by being kicked by a mule while trying to pass it on main road.
July	1	James Madden,	American,	Runner,	27	S.			Mt. Pleasant,	Lackawanna,		Fatally injured by a collar falling upon him while sitting alongside the gangway road. Died July 10.
		Joseph Kikoe,	Polish,	Rockman,	30	M.	1	2	Diamond,			Killed by fall of roof near face of chamber. He fired a blast in the top rock, which only sagged it. He tried to pull it down with a drill, but failed. He then went to put some dynamite on top of it when the roof fell upon him.
	6	Stephen Waradi,	Hungarian,	Doorman,	61	M.	1		Pancoast,			Killed by being run over by loaded mine cars while going to his door to open it.
		Peter Deepey,	Slavonian,	Driver,	18	S.			Pennsylvania No. 1,			Fatally injured by falling under mine cars. He was riding on the front top of an empty mine car, which was in a trip of cars conveying the employes to work, and reached over to the car ahead and took a squib box out of a miner's pocket, and in leaning back he lost his balance and fell under the cars. Died July 10. Outside.
Aug.	25	John Laruman,	Polish,	Laborer,	22	S.			Bulls Head,			Instantly killed. He took hold of an electric wire with both hands.
Sept.	3	Joseph Randis,	Polish,	Miner,	28	M	1	3	Von Storch,			Fatally burned while making a cartridge with his lamp upon his head. A spark from the lamp fell into the powder.

TABLE 4—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Colliery	County	Nature and Cause of Accident in Brief
Sept. 14	Anthony Lindsay, ---	American,--	Runner, -----	23	S.	----	----	Von Storch, ------	Lackawanna,	Fatally injured. While replacing a car on the track a piece of rock slid from behind a prop, fracturing his spine.
16	Louis Nohigh, -------	Polish, ----	Laborer, ----	32	M.	1	----	Pine Brook, ------		Killed by jumping in front of electric motor near foot of shaft.
20	Frank Bello, ---------	Hungarian,	Miner, -------	29	M.	1	1	Brisbin, ----------		Fatally injured by fall of roof near face of chamber. While restanding a discharged prop a piece of roof fell upon him. Died October 2.
Oct. 4	Tony Malinoski, -----	Polish, ----	Laborer, ----	20	S.	----	----	Pancoast, --------		Killed by flying coal from blast at face of chamber. His miner prepared a blast and told Malinoski to go back on the chamber road and give warning before firing. The miner ignited the squib and went to a place of safety, and when he returned to the face he found the laborer dead near the face.
7	John Colams, -------	Polish, ----	Miner, -------	32	M.	1	----	Bulls Head, ------		Killed by fall of roof at face of chamber. He went into his working place in the morning and pulled down some loose roof rock and then sat down to have a smoke, when a piece of roof fell upon him.
	Steve Sergot, ---------	Slavonian,	Company man,	21	S.	----	----	Pennsylvania No. 1,		Killed by trip of loaded mine cars. He was walking up a steam plane when a trip of eight loaded cars came down and ran into him.
22	Charles Patake, ----	Austrian, --	Miner, -------	24	M.	1	2	Von Storch, ------		Killed near face of chamber while taking out pillars. He fired a blast, which discharged a prop, and while cleaning away some coal to restand the prop, a piece of roof fell upon him.

Oct.	26	Thomas Gorman,	Lithuanian.	Miner,	31	M.	1	1	Manville,			Killed by flying coal from blast at face of chamber. He sent his laborer to warn the men in the next chamber that he was going to fire on the rib. After the shot went off the laborer went back to the face and found the body of the miner against the rib opposite to where the shot was fired. His lamp was found near the hole, which would indicate that he was very near when the charge exploded.
Nov.	11	John Drurka,	Slavonian,	Miner,	31	M.	1	2	Pennsylvania No. 1,			Killed by fall of roof at face of chamber. He had a dangerous piece of roof at face of his chamber with only one prop under it, and while he was drilling a hole on the rib side it fell upon him.
	19	Patrick Burke,	Irish,	Driver,	17	S.			Gipsy Grove,	Lackawanna,		Killed by fall of roof in chamber. The miner fired a blast and then examined the roof and considered it safe. They started to load a car and Burke went to the face to help the men to load, when the roof fell.
	23	Thomas Carney,	Irish,	Miner,	42	M.	1	1	Dickson,			Killed by fall of roof at face of chamber. He was getting ready to drill a hole when the roof fell upon him.
Dec.	13	John Barber,	Lithuanian.	Miner,	40	M.	1	4	Diamond,			Killed by flying coal from blast at face of chamber. He prepared two holes. He fired one and then went back to fire the second when it exploded before he could get to a place of safety.
	30	Paul Kowwass,	Russian,	Miner,	40	M.	1		Pennsylvania No. 1,			Killed by fall of roof at face of chamber. He was ordered by the foreman to take down some roof that was dangerous, but failed to do so, and while he was drilling a hole the roof fell upon him.

TABLE 5.—Non-fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Colliery	County	Nature and Cause of Accident in Brief
Jan. 4	Michael Gowell,	Polish,	Laborer,	20	S.	Diamond,	Lackawanna,	Leg fractured by flying coal from blast.
11	Enick Widruvich,	Lithuanian,	Miner,	31	S.	Dickson,		Leg fractured by flying coal from blast.
19	Tigo Janos,	Hungarian,	Miner,	40	M.	Pennsylvania No. 1,		Cut on head and body by flying coal from blast.
30	James Long,	Italian,	Miner,	39	M.	Pennsylvania No. 5,		Leg fractured by fall of roof at face of chamber.
Feb. 1	Michael Sacko,	Lithuanian,	Miner,	35	M.	Manville,		Injured by flying coal from blast.
	Steve Smalko,	Russian,	Laborer,	24	S.	Pennsylvania No. 1,		Hip dislocated by fall of roof at face of chamber.
	August Demasco,	Italian,	Laborer,	21	S.	Pennsylvania No. 1,		Injured by fall of roof at face of chamber.
5	Adam Waraski,	Russian,	Runner,	21	S.	Pancoast,		Leg fractured by falling between mine cars on main gangway road.
8	Barney Strick,	American,	Runner,	23	S.	Pine Brook,		Arm fractured between mine car and prop near face of chamber.
26	Anthony Novak,	Slavonian,	Doorman,	65	M.	Brisbin,		Injured by being struck by mine car on main gangway road.
March 6	George Levitzki,	Polish,	Driver,	22	S.	Diamond Washery,		Ribs fractured and lung punctured by a kick from a mule. Outside.
10	John Decker,	Irish,	Miner,	43	M.	Carney and Brown,		Leg fractured by a fall of roof at face of chamber.
16	George Hawlk,	German,	Bellman,	48	M.	Brisbin,		Ribs fractured by falling off cage into sump.
22	Joseph Yunis,	Lithuanian,	Miner,	43	M.	Mount Pleasant,		Leg fractured by fall of roof at face of chamber.
	John Esturich,	Polish,	Laborer,	30	S.	Pennsylvania No. 1,		Arm fractured by fall of roof at face of chamber.
25	Athony Bobams,	Polish,	Miner,	43	M.	Brisbin,		Injured by flying rock from blast.
27	John Metnkanetz,	Slavonian,	Miner,	28	S.	Gipsy Grove,		Part of foot cut off by fall of roof at face of chamber.
31	George Lock,	Slavonian,	Driver,	17	S.	Pennsylvania No. 1,		Leg fractured by cars inside while riding on bumper on main gangway road.

April	15	Andrew Cimock,	Hungarian,	Miner,	33	M.	Pancoast,			Arm fractured, face and hands cut by flying coal from blast.
	20	Frank Marrian,	American,	Driver,	19	S.	West Ridge,			Leg fractured by being caught between mine car and rib, on main gangway road.
	30	John Kotchi,	Slavonian,	Company man,	29	M.	Pennsylvania No. 1,			Leg fractured by being caught between two mine cars near foot of main hoisting shaft.
May	1	Thomas Ruane,	Irish,	Miner,	43	M.	Dickson,			Ankle dislocated by fall of roof at face of chamber.
	3	John Gnilsky,	Polish,	Miner,	33	M.	Pancoast,			Leg fractured by fall of roof at face of chamber.
	12	Mathew Branton,	English,	Miner,	46	M.	Pennsylvania No. 1,			Injured by fall of roof at face of chamber.
	21	John Walsh,	Irish,	Miner,	42	M.	Gipsy Grove,			Arm fractured and head cut by fall of roof at face of chamber.
		Frank Slawisky,	Polish,	Miner,	25	S.	Pennsylvania No. 1,			Face, arms and chest cut by flying coal from blast.
		Joseph Horney,	Slavonian,	Miner,	32	M.	Pennsylvania No. 1,			Face and arms cut by flying coal from blast.
	25	Filivia Busare,	Italian,	Miner,	40	M.	Mount Pleasant,			Injured by fall of roof at face of chamber.
	28	Phillip Nahlin,	German,	Miner,	54	M.	Pennsylvania No. 5,		Lackawanna,	Leg fractured by fall of roof at face of chamber.
June	22	Thomas Norton,	American,	Runner,	19	S.	Pancoast,			Arm fractured by a falling prop.
July	1	Thomas H. Davis,	American,	Rockman,	49	M.	Diamond,			Injured by fall of roof near face of chamber.
	12	Barney Savage,	Lithuanian,	Runner,	20	S.	Dickson,			Collar bone broken by falling on rail.
	14	Mike Kofeski,	Polish,	Laborer,	20	S.	Diamond,			Leg fractured by being caught by mine car at face of chamber.
	16	Frank Sawohesky,	Hungarian,	Laborer,	34	S.	Brisbin,			Arm fractured by fall of top coal at face of chamber.
	21	Earnest Merrix,	English,	Company man,	28	M.	Pancoast,			Face and hands burned by gas.
	22	Thomas Jenkins,	Welsh,	Driver,	17	S.	Brisbin,			Leg fractured between mine cars on main gangway road while riding between them.
Aug.	11	Joseph Wilko,	Polish,	Runner,	30	M.	Pancoast,			Foot amputated by being run over by railroad car at breaker. Outside.
	25	Charles Chelipsky,	Slavonian,	Laborer,	26	M.	Manville,			Leg fractured by fall of roof near face of chamber.
Sept.	2	John Wydo,	Russian,	Laborer,	28	M.	Green Ridge,			Ribs fractured by a piece of black-head sliding from gob.
		Vasil Hanevsage,	Austrian,	Laborer,	30	M.	Von Storch,			Leg fractured by fall of roof at face of chamber.
	8	Daniel Chapman,	American,	Machinist,	34	M.	Pennsylvania No. 5,			Skull and arm fractured by falling boiler frame. Outside.
	11	John Shinsky,	Polish,	Slate-picker,	15	S.	Green Ridge,			Leg amputated by being caught in machinery in breaker. Outside.

TABLE 5.—Non-fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Colliery	County	Nature and Cause of Accident in Brief
Sept. 18	John Gergortz,	Hungarian,	Miner,	35	M.	Pancoast,	Lackawanna,	Arm fractured by fall of roof at face of chamber.
Oct. 16	John Gradasky,	Polish,	Miner,	45	M.	Von Storch,		Leg fractured by mine car near face of chamber.
27	Mike Dukins,	Polish,	Miner,	54	S.	Bulls Head,		Arm fractured by being struck by mine car on main gangway road.
Nov. 5	Edward Blackledge,	American,	Slate-picker,	14	S.	Pine Brook,		Injured by being caught in machinery in breaker. Outside.
6	Eli Howarth,	English,	Miner,	47	M.	Von Storch,		Leg fractured by fall of coal at face of chamber.
16	Frank Fawcett,	English,	Miner,	40	M.	Dickson,		Injured by fall of roof at face of chamber.
23	Michael Glynn,	Irish,	Laborer,	29	M.	Nay Aug,		Leg fractured by a rock boulder rolling upon him. Outside.
30	John Hubert,	German,	Miner,	50	M.	Manville,		Leg fractured by fall of roof at face of chamber.
Dec. 9	William McNamarra,	Irish,	Company man,	25	S.	Von Storch,		Leg fractured by fall of roof on main road.
10	George Goursky,	Polish,	Laborer,	35	M.	Mount Pleasant,		Injured by fall of slate at face of chamber.
14	George Sivitsky,	Polish,	Miner,	29	M.	Pine Brook,		Injured by flying coal from blast.
30	Kerila Slowka,	Russian,	Laborer,	22	S.	Pennsylvania No. 1,		Leg fractured by fall of roof at face of chamber.

CONDITION OF COLLIERIES

DELAWARE, LACKAWANNA AND WESTERN RAILROAD COMPANY

Brisbin.—Ventilation, roads and drainage good. Condition as to safety good.

Cayuga.—Ventilation, roads and drainage good. Condition as to safety good.

Diamond.—Diamond shaft; Ventilation, roads and drainage good. Condition as to safety good.

Diamond drift: Ventilation good; roads and drainage fair. Condition as to safety good.

Tripp shaft: Ventilation fair; roads and drainage good. Condition as to safety good.

Manville.—Ventilation, roads and drainage good. Condition as to safety good.

PENNSYLVANIA COAL COMPANY

Pennsylvania No. 1.—Pennsylvania No. 1 shaft: Ventilation fair; roads and drainage good. Condition as to safety good.

Pennsylvania No. 2 drift: Ventilation, roads and drainage good. Condition as to safety good.

Pennsylvania No. 5.—Ventilation, roads and drainage good. Condition as to safety good.

Gipsy Grove.—Ventilation, roads and drainage good. Condition as to safety good.

SCRANTON COAL COMPANY

Pine Brook.—Ventilation, roads and drainage good. Condition as to safety good.

Mount Pleasant.—Ventilation, roads and drainage good. Condition as to safety good.

West Ridge.—Ventilation, roads and drainage good. Condition as to safety good.

HUDSON COAL COMPANY

Dickson.—Ventilation, roads and drainage good. Condition as to safety good.

Von Storch.—Ventilation good, roads and drainage fair. Condition as to safety good.

PRICE-PANCOAST COAL COMPANY

Pancoast.—Ventilation, roads and drainage good. Condition as to safety good.

GREEN RIDGE COAL COMPANY

Green Ridge.—Ventilation, roads and drainage good. Condition as to safety good.

NORTH END COAL COMPANY

North End.—Ventilation, roads and drainage fair. Condition as to safety good.

A. D. AND F. M. SPENCER COAL COMPANY

Spencer.—Ventilation, roads and drainage fair. Condition as to safety good. The principal work done is robbing pillars.

CARNEY AND BROWN COAL COMPANY

Carney and Brown.—Ventilation, roads and drainage good. Condition as to safety good. The principal work done is robbing pillars.

NAY AUG COAL COMPANY

Nay Aug.—Ventilation, roads and drainage fair. Condition as to safety good. The principal work done is robbing pillars.

BULLS HEAD COAL COMPANY

Bulls Head.—Ventilation, roads and drainage fair. Condition as to safety good. The principal work done is robbing pillars.

CLEARVIEW COAL COMPANY

Clearview.—Ventilation, roads and drainage good. Condition as to safety good.

IMPROVEMENTS

DELAWARE, LACKAWANNA AND WESTERN RAILROAD COMPANY

Diamond.—A rock tunnel, 7 x 12 x 325 feet long, driven through fault from Surface vein to Surface vein.

Diamond Tripp shaft. A rock tunnel, 7 x 12 x 250 feet, driven from Rock vein to Diamond vein. A concrete and fire-proof blacksmith and carpenter shop combined. A new wash house to accommodate the employes in and around the colliery. One Duplex pump installed in No. 2 shaft, capacity 3,500 gallons.

PENNSYLVANIA COAL COMPANY

Pennsylvania No. 1.—Opened up the Clark and Marcy veins near the breaker by a slope.

Pennsylvania No. 5.—Erected a fire-proof steam boiler plant, 100 x 58 feet, and placed therein three batteries of B. and W. boilers, a total of 1,200 horse power, together with feed water heater, fan, etc. Repaired and remodeled the breaker. It is now practically a new breaker. Installed electric hoist inside for the purpose of dropping the coal from the 1st and 2d Dunmore veins above the fault, down through the Clark vein to the shaft below the fault. Drove a 7 x 10 rock tunnel, 370 feet long, from second Dunmore vein to first Dunmore vein, to be used for haulage. Placed a concrete cribbing from the surface to the rock, a distance of about forty feet in old No. 2 shaft, and erected a ventilating fan.

PRICE-PANCOAST COAL COMPANY

Pancoast.—Drove a rock tunnel 485 feet long from Diamond vein to Surface vein, and sunk a shaft 8 x 10 x 65 feet deep from surface to same vein for ventilation and second opening. Slope, 7 x 12 x 200 feet, driven from No. 1 Dunmore vein to No. 4 Dunmore vein, and shaft, 8 x 10 x 20 feet, sunk from No. 1 Dunmore vein to No. 4 Dunmore vein for ventilation and second opening. Extended tail rope system 3,000 feet inside.



FOURTH DISTRICT

LACKAWANNA COUNTY

Scranton, Pa., February 18, 1910.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor to transmit herewith my report as Inspector of Mines for the Fourth Anthracite District for the year ending December 31, 1909, as required by the Act of April 14, 1903.

Respectfully submitted,

H. O. PRYTHERCH, Inspector.

SUMMARY OF STATISTICS

Number of collieries,	13
Number of mines,	32
Number of mines in operation,	32
Number of tons of coal shipped to market,	3,770,143
Number of tons used at mines for steam and heat,	132,029
Number of tons sold to local trade and used by employes,	162,587
Number of tons produced,	4,064,759
Number of tons produced by compressed air machines,	——
Number of tons produced by electrical machines,	——
Number of persons employed inside of mines,	6,547
Number of persons employed outside,	1,935
Number of fatal accidents inside of mines,	24
Number of fatal accidents outside,	1
Number of non-fatal accidents inside of mines,	72
Number of non-fatal accidents outside,	9
Number of tons of coal produced per fatal accident inside,	169,365
Number of persons employed per fatal accident inside,	273
Number of persons employed per fatal accident outside,	1,935
Number of persons employed per non-fatal accident inside,	91
Number of persons employed per non-fatal accident outside,	215
Number of wives made widows,	13
Number of children made orphans,	29
Number of steam locomotives used inside of mines,	——
Number of steam locomotives used outside,	11
Number of compressed air locomotives used inside,	——
Number of compressed air locomotives used outside,	——
Number of electric motors used inside,	60
Number of electric motors used outside,	——
Number of fans in use,	25
Number of furnaces in use,	——
Number of gaseous mines in operation,	16
Number of non-gaseous mines in operation,	16
Number of new mines opened,	——
Number of old mines abandoned,	——

TABLE A

PRODUCTION OF COAL

Names of Operators	Tons
Delaware, Lackawanna and Western Railroad Company,	3,325,427
Delaware and Hudson Company,	232,162
Scranton Coal Company,	209,178
Peoples Coal Company,	171,898
Marian Coal Company,	101,871
Fern Coal Company,	15,778
Minooka Coal Company,	8,445
Total,	4,064,759

Production by Counties

Lackawanna,	4,064,759

TABLE B.—Fatal and non-fatal accidents inside and outside of mines; number of tons of coal produced per accident; number of persons employed; number employed per accident

Names of Operators	Fatal Accidents			Non-Fatal Accidents			Tons of coal produced per fatal accident inside	Tons of coal produced per non-fatal accident inside	Number of employes inside	Number of employes outside	Total number of employes	Number of employes inside per fatal accident	Number of employes outside per fatal accident	Number of employes inside per non-fatal accident	Number of employes outside per non-fatal accident
	Inside	Outside	Total	Inside	Outside	Total									
Delaware, Lackawanna and Western Railroad Co.,	15	1	16	59	8	67	221,695	56,363	5,205	1,374	6,579	347	1,374	88	172
Delaware and Hudson Co.,	2	----	2	3	1	4	116,081	77,387	664	252	916	332	----	221	252
Scranton Coal Co.,	2	----	2	7	----	7	104,589	29,882	452	139	591	226	----	64	----
Peoples Coal Co.,	5	----	5	3	----	3	34,379	57,299	214	110	324	43	----	71	----
Miscellaneous Companies,	----	----	----	----	----	----	----	----	12	60	72	----	----	----	----
Totals and averages for district,	24	1	25	72	9	81	169,365	56,455	6,547	1,935	8,482	273	1,935	91	215

TABLE C.—Classification of Fatal Accidents Inside and Outside of Mines

	Months													
	January	February	March	April	May	June	July	August	September	October	November	December	Totals	Percentages
Causes of Accidents Inside														
Falls of roof,	1	1	3	1	....	....	....	2	2	....	....	....	10	41.67
Mine cars,	1	....	1	....	....	1	1	....	....	....	1	2	7	29.17
Explosions of powder and dynamite,	....	....	....	....	....	....	....	....	....	....	1	1	2	8.33
Blasts, premature and otherwise,	1	....	....	....	....	....	....	....	....	1	....	1	3	12.50
Electricity,	....	....	....	....	....	1	....	....	....	1	....	....	2	8.33
Totals,	3	1	4	1	....	2	1	2	2	2	2	4	24	100.00
Causes of Accidents Outside														
Miscellaneous,	1	....	....	....	....	....	....	....	....	....	....	....	1	100.00
Totals,	1	....	....	....	....	....	....	....	....	....	....	....	1	.....
Grand totals inside and outside,	4	1	4	1	....	2	1	2	2	2	2	4	25	.....

TABLE D.—Classification of Non-Fatal Accidents Inside and Outside of Mines

	Months													
	January	February	March	April	May	June	July	August	September	October	November	December	Totals	Percentages
Causes of Accidents Inside														
Falls of roof,	4	3	2	3	2	2	2	6	1	3	2	1	31	43.05
Mine cars,	2	2	2	2	2	3	1	1	....	....	....	2	17	23.61
Explosions of powder and dynamite,	....	2	....	....	....	....	....	....	....	....	....	....	2	2.78
Blasts, premature and otherwise,	1	1	....	1	....	....	....	....	1	2	....	5	11	15.28
Falling into shafts,	....	....	....	....	....	....	....	....	....	....	1	....	1	1.39
Mules,	....	....	....	2	....	1	....	1	....	....	....	....	4	5.56
Miscellaneous,	....	1	....	2	....	1	....	....	....	....	....	2	6	8.33
Totals,	7	9	4	10	4	7	3	8	2	5	3	10	72	100.00
Causes of Accidents Outside														
Cars,	1	....	....	....	....	....	....	1	....	....	....	1	3	33.33
Machinery,	....	....	....	....	....	....	....	....	1	....	....	....	1	11.11
Miscellaneous,	1	....	1	....	1	1	....	....	....	....	....	1	5	55.56
Totals,	2	....	1	....	1	1	....	1	1	....	....	2	9	100.00
Grand totals inside and outside,	9	9	5	10	5	8	3	9	3	5	3	12	81	.....

TABLE E.—Occupations of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Inside													
Miners,	1		3	1				1	2	1	1		10
Miners' laborers,	1	1				1						1	4
Drivers and runners,	1		1					1				1	4
Pumpmen,										1			1
Company men,						1	1					1	3
Rockmen,											1	1	2
Totals,	3	1	4	1		2	1	2	2	2	2	4	24
Outside													
Slatepickers (boys),	1												1
Totals,	1												1
Grand totals inside and outside,	4	1	4	1		2	1	2	2	2	2	4	25

TABLE F.—Occupations of Persons Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Inside													
Miners,	3	5		3		1	1			1	1	3	18
Miners' laborers,	1	1	2	2	3	2	1	5	1	4	2	3	27
Drivers and runners,	1			3	1	3						2	10
Doorboys and helpers,	1	1	1				1	1					5
Company men,		2		1		1			1				5
Motormen,			1	1				1					3
Timbermen,								1					1
Rockmen,												2	2
Brakemen,	1												1
Totals,	7	9	4	10	4	7	3	8	2	5	3	10	72
Outside													
Engineers and firemen,									1			1	2
Drivers,						1							1
Loaders,	1							1					2
Laborers,	1											1	2
Company men,			1		1								2
Totals,	2		1		1	1		1	1			2	9
Grand totals inside and outside,	9	9	5	10	5	8	3	9	3	5	3	12	81

TABLE G.—Nationality of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
American,	1		1					1		1		1	5
English,			1									1	2
Irish,						1	1		1	1			4
Polish,	2	1	2	1		1			1		2	1	11
Lithuanian,								1				1	2
Swedish,	1												1
Totals,	4	1	4	1		2	1	2	2	2	2	4	25

TABLE H.—Nationality of Persons Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
American,	2	1		3	1	4		2	1			2	16
Welsh,		2	1	3	1	1	2	3	1				14
Irish,	3	1		1	1					1	2	2	11
German,			1										1
Polish,	2	4	3	3	2	3		3		2	1	4	27
Hungarian,								1					1
Italian,												1	1
Slavonian,	1	1											2
Lithuanian,	1						1		1			3	6
Swedish,										2			2
Totals,	9	9	5	10	5	8	3	9	3	5	3	12	81

TABLE I.—Operators and mines, kind of openings, type and size of fans, size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents and number of persons employed inside

Names of Operators and Mines	Kind of opening	Gaseous or non-gaseous	Method of ventilation	Diameter of fan in feet and inches	Width of blades in feet and inches	Depth of blades in feet and inches	Number of revolutions per minute	Water gauge developed—in inches	Name of fan	Power used	Number of splits of air currents	Number of cubic feet of air per minute entering the mine at inlet	Total quantity of air per minute circulating in all the splits in cubic feet	Number of cubic feet per minute passing out at outlet	Number of persons employed inside
Delaware, Lackawanna and Western Railroad Co.															
Bellevue Colliery:				16	4.5	4.5	126	1.1	Guibal,	Steam,	6	97,241	91,008	101,647	839
Bellevue,	Shaft,	Gaseous,	Fans,	14	4	4	112	.9	Guibal,	Steam,	5	71,750	63,540	80,730	
Bellevue,	Slope,	Gaseous,	Fan,	14	4	4	112	.7	Guibal,	Steam,	5	80,040	71,870	90,575	
Dodge Colliery:															
Dodge,	Shaft,	Gaseous,	Fan,	16	4.5	4.5	118	1.1	Guibal,	Steam,	10	115,870	97,888	191,284	512
Dodge,	Slope,	Non-gas.,	Fan,	14	3.5	3.5	112	.9	Guibal,	Steam,	10	31,550	34,945	33,941	
Holden Colliery:															
Holden,	Shaft,	Gaseous,	Fan,	25	8	6	48	1.4	Guibal,	Steam,	5*	144,200	130,785	149,514	422
National Colliery:															
National,	Shaft,	Gaseous,	Fan,	16	4	4	120	1.1	Guibal,	Steam,	6	102,000	95,600	115,500	547
National,	Drift,	Non-gas.,	Fan,												
Meadow Brook,	Tunnel,	Gaseous,	Fan,	14	4	4	90	.7	Guibal,	Steam,	2	29,000	26,800	32,200	
Archbald Colliery:															
Archbald,	Shaft,	Gaseous,	Fan,	24	8	6	70	1.6	Guibal,	Steam,	10	183,700	163,951	218,360	742
Continental Colliery:															
Continental,	Shaft,	Gaseous,	Fan,	14	4.5	4.5	125	1.2	Guibal,	Steam,	10	159,710	161,960	192,400	477
Hyde Park Colliery:				24	8	6	60	1.4	Guibal,	Steam,	9	149,150	98,200	185,920	400
Hyde Park,	Shaft,	Gaseous,	Fans,	14	4.5	4	115	.5	Open,	Electricity,	6	40,875	30,840	59,725	170
Hyde Park,	Slope,	Non-gas.,	Fan,	14	4.5	4	51	.3	Guibal,	Steam,	1	44,000	33,480	59,000	36

*Two splits in Holden are ventilated by fan at Taylor mine.

Hampton Colliery:															
Hampton,	Shaft,	Gaseous,	Fan,	12	4	4	120	1.	Open,	Steam,	8	67,200	65,100	74,500	242
Sloan Colliery:															
Sloan,	Shaft,	Gaseous.	Fan,	24	8	6	70	2.3	Guibal,	Steam,	10	155,900	114,350	161,300	275
Sloan (Surface),	Shaft,	Non-gas.,									2	22,400	18,900	32,200	163
Central,	Shaft,	Gaseous,	Fan,	24	8	6	60	1.5	Guibal,	Steam,	7	170,000	59,310	178,390	330
Delaware and Hudson Co.															
Greenwood Colliery:															
Greenwood New No. 1,	Shaft,	Gaseous,	Fan,	17	5	4	75	.4	Guibal,	Steam,	2	31,600	27,900	33,800	110
Greenwood Old No. 1,	Shaft,	Non-gas.,	Fan,	17	4	3.5	85	.4	Guibal,	Steam,	2	27,900	25,200	32,100	102
Greenwood No. 2,	Shaft,	Gaseous,	Fan,	17	5	4	75	.7	Guibal,	Steam,		45,800	40,350	41,910‖	121
Greenwood No. 5,†	Shaft,	Non-gas.,	Natural,												
Greenwood No. 6,‡	Drift,	Non-gas.,	Natural,												
Greenwood No. 7,‡	Drift,	Non-gas.,	Natural,												
Greenwood No. 8,	Drift,	Non-gas.,	Natural,									18,200	17,400	19,200	80
Greenwood No. 11,	Drift,	Non-gas.,	Natural,									8,500	7,500	9,200	26
Greenwood No. 12,	Drift,	Non-gas.,	Natural,									14,300	13,700	15,400	20
Greenwood No. 15,	Drift,	Non-gas.,	Fan,	10	3.5	2.75	65	.3	Open,	Steam,	1	11,880	10,080	13,050	38
Greenwood No. 16,	Drift,	Non-gas.,	Fan,	10	3	3	65	.3	Open,	Steam,	1	10,080	9,350	11,220	27
Greenwood, Oak Hill or No. 14,	Drift,	Non-gas.,	Natural,								1	12,220	10,100	13,000	36
Greenwood No. 2,	Slope,	Non-gas.,	Fan,	14	4	3.5	75	.3	Open,	Steam,	2	28,000	25,600	30,500	107
Scranton Coal Co.															
Capouse Colliery:															
Capouse,	Shaft,	Gaseous,	Fan,	20	5.5	5	75	1.	Guibal,	Steam,					
				18	5	5	80	1.	Guibal,	Steam,	10	146,700	130,100	161,600	278
Peoples Coal Co.															
Oxford Colliery:															
Oxford,	Shaft,	Gaseous,	Fan,	16	4.7	4	90	.7			6	93,050	67,300	94,450	140
Minooka Coal Co.															
Minooka Colliery:															
Minooka,	Drift,	Non-gas.,	Natural,												

†Ventilated from Oak Hill.
‡Ventilated from No. 1 Old Shaft.
‖Owing to the many connections in the old workings, together with cave holes, it is difficult to collect the outcoming air at one place for measurement.

TABLE 1.—Operators, location of collieries, railroads, etc.

Names of Operators and Collieries	County	Name of General Superintendent	Post Office	Name of Superintendent	Post Office	Railroad to Mine
Delaware, Lackawanna and Western Railroad Co.						
Bellevue, Dodge, Holden, National, Archbald, Continental, Hyde Park, Hampton, Sloan and Central,	Lackawanna,	R. A. Phillips,	Scranton,	Evan J. Evans,	Scranton,	D. L. and W.
Bellevue, Dodge, Holden, National, Archbald, Continental, Hyde Park, Hampton, Sloan and Central,	Lackawanna,	R. A. Phillips,	Scranton,	Thomas J. Williams	Scranton,	D. L. and W.
Washeries						
Bellevue, Archbald, Hyde Park, Hampton,	Lackawanna,	R. A. Phillips,	Scranton,	George Wethers, Thomas J. Williams, Evan J. Evans, George Wethers,	Scranton,	D. L. and W.
Delaware and Hudson Co.						
Greenwood, Greenwood Washery,	Lackawanna,	C. C. Rose,	Scranton,	E. R. Pettebone,	Dorranceton,	D. and H.
Scranton Coal Co.						
Capouse,	Lackawanna,	W. L. Allen,	Peckville,	John Von Bergen,	Scranton,	Ontario and Western
Peoples Coal Co.						
Oxford,	Lackawanna,	James G. Shepherd,	Scranton,	John G. Hayes,	Scranton,	D. L. and W.
Marian Coal Co.						
Marian Washery,	Lackawanna,	W. P. Boland,	Scranton,	Mantice Sullivan,	Scranton,	D. L. and W.
Fern Coal Co.						
Fern Washery,	Lackawanna,	F. P. Law,	Taylor,			D. and H.
Minooka Coal Co.						
Minooka,	Lackawanna,	Thomas Quinn,	Scranton,			

TABLE 2.—Number of tons of coal mined, number of days worked, number of persons employed, number killed and injured, quantity of powder, dynamite and so-called safety explosives used, etc.

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Explosives: Number of pounds of powder used	Explosives: Number of pounds of dynamite used	Number of horses and mules
Delaware, Lackawanna and Western Railroad Co.												
Bellevue,	Lackawanna,	368,074	400	18,138	386,612	204	1,008	....	6	425,550	10,804	46
Dodge,		244,374	254	983	245,611	209	610	2	17	302,175	59,000	46
Holden,		244,117	15,023	1,296	260,436	210	515	3	1	240,375	400	29
National,		240,273	22,611	3,968	266,852	226	659	1	3	366,925	36,144	64
Archbald,		468,414	20,193	163	488,770	273	804	....	8	534,625	2,748	96
Continental,		272,679	280	2,381	275,340	276	597	1	8	299,325	2,562	74
Hyde Park,		251,683	98	18,479	270,260	247	720	3	11	382,725	35,810	64
Hampton,		128,803	8	.....	128,811	211	320	1	3	109,575	10,309	37
Sloan and Central,		359,048	.....	41	359,089	239	922	5	8	408,000	14,640	54
		2,577,465	58,867	45,449	2,681,781	.....	6,245	16	65	3,069,275	172,417	510
Washeries												
Bellevue,	Lackawanna,	246,692	.....	.....	246,692	255	82	....	1	125	12	8
Archbald,		92,350	.....	.....	92,350	223	27	....	.....	.....	.....	.....
Hyde Park,		71,912	.....	.....	71,912	220	25	....	.....	.....	.....	.....
Hampton,		232,692	.....	.....	232,692	256	65	....	1	.....	.....	2
Water Shaft,		.....	.....	.....	.....	.....	135	....	.....	.....	.....	.....
		643,646	.....	.....	643,646	.....	334	....	2	125	12	10
Totals,		3,221,111	58,867	45,449	3,325,427	.....	6,579	16	67	3,069,400	172,429	520

TABLE 2—Continued

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Explosives: Number of pounds of powder used	Explosives: Number of pounds of dynamite used	Number of horses and mules
Delaware and Hudson Co.												
Greenwood,	Lackawanna,	173,708	19,566	2,327	195,601	131	890	2	4	400,475	34,760	106
Greenwood Washery,		20,093	16,468	.....	36,561	83	26	.....	.....	.....	.....	.....
Totals,		193,801	36,034	2,327	232,162	.....	916	2	4	400,475	34,760	106
Scranton Coal Co.												
Capouse,	Lackawanna,	183,928	21,900	3,350	209,178	147	591	2	7	335,625	29,000	66
Peoples Coal Co.												
Oxford,	Lackawanna,	69,781	9,730	92,387	171,898	182	324	5	3	281,400	11,950	118
Marian Coal Co.												
Marian Washery,	Lackawanna,	87,744	3,348	10,779	101,871	279	40	.....	.....	.....	.....	2
Fern Coal Co.												
Fern Washery,	Lackawanna,	13,778	2,000	.....	15,778	187	13	.....	.....	.....	.....	.....
Minooka Coal Co.												
Minooka,	Lackawanna,	.....	150	8,295	8,445	137	19	.....	.....	4,500	250	3
Grand totals,		3,770,143	132,029	162,587	4,064,759	.....	8,482	25	81	4,091,400	248,389	815

TABLE 2.—Part 2

Names of Operators	County	Number of Boilers					Locomotives			Number of steam engines of all classes	Total horse power	Number of pumps delivering water to surface	Capacity in gallons per minute	Quantity delivered to surface per minute—gallons	Number of electric dynamos	Number of air compressors
		Cylindrical	Horse power	Tubular	Horse power	Total horse power	Steam	Air	Electric							
Delaware, Lackawanna and Western Railroad Co.,	Lackawanna,	8	900	43	13,777	14,677	6	.....	60	136	13,356	23	27,203	17,456	21	5
Delaware and Hudson Co.,		21	588	7	1,325	1,913	5	.....	.....	59	1,885	9	5,000	2,500	1	2
Scranton Coal Co.,		.....	.....	7	1,075	1,075	.....	.....	.....	12	1,150	5	5,700	4,500	.....	.....
Peoples Coal Co.,		.....	.....	5	1,500	1,500	.....	.....	.....	14	857	3	1,575	750	2	1
Marian Coal Co.,		.....	.....	3	310	310	.....	.....	.....	3	95	.....	.....	.....	.....	.....
Fern Coal Co.,		.....	.....	2	100	100	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Minooka Coal Co.,		.....	.....	1	50	50	.....	.....	.....	2	50	.....	.....	.....	.....	.....
Totals,	.....	29	1,488	68	18,137	19,625	11	.....	60	226	17,393	40	39,478	25,206	24	8

TABLE 3.—Number of each class of employes inside and outside of mines

Names of Operators	County	Inside											Outside										Grand total inside and outside
		Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Doorboys and helpers	Pumpmen	Company men	All other employes	Total inside	Superintendents	Foremen	Blacksmiths and carpenters	Engineers and firemen	Slate pickers (boys)	Slate pickers (men)	Bookkeepers and clerks	All other employes	Total outside	
Delaware, Lackawanna and Western Railroad Co.,	Lackawanna,	15	10	40	1,724	1,729	408	126	38	549	566	5,205	....	19	60	123	312	45	38	777	1,374	6,579
Delaware and Hudson Co.,		2	1	3	283	215	96	16	4	37	7	664	....	1	15	35	37	9	4	151	252	916
Scranton Coal Co.,		1	1	4	141	124	75	15	4	25	62	452	1	1	8	12	40	20	2	55	139	591
Peoples Coal Co.,		1	2	3	80	80	20	7	4	10	7	214	1	1	7	10	25	.....	6	60	110	324
Marian Coal Co.,		----	----	----	----	----	----	----	----	----	----	----	1	1	1	4	7	.....	1	25	40	40
Fern Coal Co.,		----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	2	1	10	13	13
Minooka Coal Co.,		----	----	----	5	5	2	----	----	----	----	12	----	----	----	1	4	1	1	.....	7	19
Totals,		19	14	50	2,233	2,153	601	164	50	621	642	6,547	3	23	91	185	425	77	53	1,078	1,935	8,482

TABLE 3.—Part 2

Names of Operators	County	Average Number of Days Worked in Breaker												
		January	February	March	April	May	June	July	August	September	October	November	December	Total
Delaware, Lackawanna and Western Railroad Co.,	Lackawanna,	17	12	23	21	20	21	18	19	16	20	23	23	233
Delaware and Hudson Co.,		14	12	16	14	14	13	10	6	2	6	12	12	131
Scranton Coal Co.,		12	12	15	12	14	15	14	12	13	6	9	13	147
Peoples Coal Co.,		17	17	19	15	15	14	14	16	15	15	13	12	182
Minooka Coal Co.,		17	14	14	11	11	10	.....	.....	11	14	16	19	137

TABLE 4.—Fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Colliery	County	Nature and Cause of Accident in Brief
Jan. 9	Joe Dunkosky,	Polish,	Laborer,	20	S.			Central,		Killed by a blast at face of chamber. He was helping his miner to tamp a charge of powder.
9	Charles Carlson,	Swedish,	Miner,	44	M.	1	2	Hyde Park,		Fatally injured by fall of roof at face of chamber in Diamond vein.
14	Harry Dalton,	American,	Runner,	28	M.	1		National,		Killed by runaway cars on gangway road.
25	Frank Salina,	Polish,	Slatepicker,	16	S.			Holden,		Killed by falling from one floor of the breaker to the floor below. Outside.
Feb. 20	Michael Bentkoski,	Polish,	Laborer,	20	S.			Greenwood,		Killed by a fall of roof in No. 8 drift at face of chamber.
March 8	Anthony Soloski,	Polish,	Runner,	19	S.			Sloan,		Fatally injured by cars in chamber. He fell off the front end of a car pushed by an electric motor. Died March 18.
10	Mike Siniski,	Polish,	Miner,	32	M.	1	3	Dodge,		Slightly injured by fall of roof at face of chamber. Died from blood poison.
18	John Henrick,	English,	Miner,	49	M.	1	2	Capouse,		Killed by fall of roof at face of chamber.
23	John Webber,	American,	Miner,	24	S.			Holden,	Lackawanna,	Killed by fall of roof at face of chamber.
April 21	Frank Munas,	Polish,	Miner,	28	M.	1		Oxford,		Killed by fall of roof at face of chamber.
June 18	Martin Carroll,	Irish,	Company man	60	M.	1	3	Central,		Killed by cars on gangway road. He was attending to a door for the day. The door was closed and blocked open when the motor passed in, and in coming out the engineer expected to find it open, but it was closed and the motor struck Carroll.
23	Tony Darkouski,	Polish,	Laborer,	21	S.			Central,		Killed by an electric shock on mine motor. He jumped onto motor.
July 19	John Forbes,	Irish,	Company man	35	S.			Hampton,		Fatally injured by cars at head of inside slope. He jumped on front end of first car of trip to uncouple the train. The trip became derailed and he was caught between the car and a prop near the rail. Died July 24.

Aug.	6	Patrick Cannon,	American,	Driver,	19	S.			Oxford,			Killed by fall of roof on gangway following a runaway trip of cars.
	11	Charles Stermack,	Lithuanian,	Miner,	28	M.	1	3	Oxford,			Instantly killed by fall of roof at face of chamber.
Sept.	4	Herbert McManamon,	Irish,	Miner,	4	M.	1	1	Hyde Park,			Fatally injured by fall of roof at face of chamber. Died September 24.
	4	Frank Sezezesuy,	Polish,	Miner,	45	M.	1	1	Central,			Killed by fall of roof at face in new county vein in chamber.
Oct.	12	Frank McCulligan,	American,	Pumpman,	32	M.	1	4	Continental,			Killed by electrocution at a point some distance from the pumps, in some manner not known to Coroner's Jury.
	29	Michael O'Donnell,	Irish,	Miner,	44	M.	1	4	Oxford,			Killed by a premature blast while he was tamping a charge. His lamp ignited a blower of gas.
Nov.	12	Thomas Lavin,	Polish,	Rockman,	38	M.	1	4	Hyde Park,			Killed by cars at foot of inside plane, while working on rock plane.
	26	John Malice,	Polish,	Miner,	36	M.	1	2	Oxford,	Lackawanna,		Fatally burned by exploding powder. He was carrying a charge of powder and a lighted cigarette in the same hand. Died December 6.
Dec.	11	George Hern,	English,	Driver,	20	S.			Capouse,			Killed by falling under moving mine cars on gangway road while passing from one side to the other.
	14	William Richards,	American,	Company man	23	S.			Holden,			Killed by falling in front of moving electric motor on passing branch. He ran ahead to throw a switch and fell.
	18	John Adamovitch,	Lithuanian,	Rockman,	35	S.			Dodge,			Killed by flying rock from a blast in tunnel. He thought the shot had missed fire and was returning to it.
	23	Bolak Molenda,	Polish,	Laborer,	18	S.			Greenwood,			Burned by powder. He was working for his father and in some manner ignited the powder. Died the next day.

TABLE 5.—Non-fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Colliery	County	Nature and Cause of Accident in Brief
Jan. 4	George Gretsge,	Slavonian,	Loader,	19	S.	Archbald,		Injured by falling from top of box car. Outside.
5	Thomas R. Coyne,	Irish,	Laborer,	69	M.	Greenwood,		Leg fractured by cars. Outside.
5	Thomas Coyne,	American,	Runner,	22	S.	Dodge,		Hand injured at a point away from the face by fall of roof.
8	Edward Cary,	Irish,	Miner,	32	M.	Oxford,		Injured by fall of roof at face of chamber in "China" vein.
8	Frank Kink,	Polish,	Laborer,	27	S.			
9	William Roginsky,	Polish,	Miner,	29	S.	Central,		Injured by blast at the face of chamber.
21	Michael Mortujart,	Lithuanian,	Miner,	42	M.	Archbald,		Foot crushed by falling rock at face of chamber.
22	Thomas Judge,	Irish,	Doorman,	60	M.	Sloan,		Back bruised by cars on gangway road.
28	Michael Mang,	American,	Brakeman,	20	S.	Sloan,		Hand injured between cars on gangway road.
Feb. 1	Thomas McNamara,	Irish,	Doorboy,	17	S.	Capouse,		Knee cap injured by cars on gangway road.
2	William T. Davies,	Welsh,	Miner,	48	M.	Sloan,		Hands and face burned by exploding powder at face.
2	Thomas Davies,	American,	Company man,	20	S.	Holden,	Lackawanna,	Back injured by cars on gangway road.
6	Charles Kleskoy,	Polish,	Miner,	38	M.	Capouse,		Injured by fall of roof at face of chamber.
10	David Jenkins,	Welsh,	Company man,	38	M.	Hampton,		Injured by a falling prop.
16	Stanley Michlavage,	Polish,	Miner,	23	S.	Dodge,		Spine broken by fall of roof at face of chamber.
18	Joseph Filkoski,	Polish,	Miner,	42	M.	Dodge,		Seriously injured by flying coal from a blast.
26	Frank Seluga,	Slavonian,	Laborer,	24	M.	Continental,		Back and legs injured by fall of roof at face of chamber.
27	John Barkoski,	Polish,	Miner,	33	M.	Greenwood,		Hands and face burned by exploding powder.
March 7	Anthony Hoffnar,	German,	Company man,	51	M.	Dodge,		Scalded by steam from ash pit. Outside.
8	John Oletski,	Polish,	Doorman,	45	M.	Bellevue,		Injured between cars and door on gangway road.

March	9	Joseph Dobelinski,	Polish,	Laborer,	24	S.	Continental,			Leg fractured by fall of roof at face of chamber.
	23	Frank Wolski,	Polish,	Laborer,	40	M.	Capouse,			Leg fractured by fall of roof at face of chamber.
	27	David J. Edwards,	Welsh,	Motorman,	30	M.	Bellevue,			Injured by runaway car on gangway road.
April	12	William J. Evans,	Welsh,	Driver,	20	M.	Hyde Park,			Foot injured by a mule stepping on it.
	13	Thomas Llewellyn,	Welsh,	Company man,	46	S.	Hyde Park,			Foot injured by an axe.
	14	Robert Scott,	American,	Miner,	40	M.	Bellevue,			Arms fractured by fall of roof at face of chamber.
	14	John Carey,	American,	Motorman,	22	S.	Bellevue,			Injured between electric motor and car on gangway road.
	16	Roman Yankoski,	Polish,	Driver,	21	S.	National,			Leg fractured by cars at foot of slope.
	20	James Graham,	Irish,	Miner,	42	M.	Dodge,			Injured by fall of roof at face of chamber.
	21	William Williams,	Welsh,	Miner,	34	S.	Continental,			Leg fractured while pulling roof rock at face of chamber.
	23	Arthur McPhillips,	American,	Driver,	19	S.	Continental,			Injured by a mule falling on him.
	24	John Perka,	Polish,	Laborer,	20	S.	Dodge,			Face injured by falling.
	30	Stanley Mislenski,	Polish,	Laborer,	24	S.	Hyde Park,			Injured by a blast at face.
May	4	Thomas Davies,	Welsh,	Laborer,	30	S.	Dodge,			Hand crushed between cars on gangway road.
	8	Burton Edwards,	American,	Runner,	20	S.	Continental,			Injured by cars on gangway road.
	13	Nick Checkan,	Polish,	Laborer,	24	S.	Archbald,			Leg fractured by falling roof rock at face of chamber.
	24	Andrew Madakus,	Polish,	Laborer,	35	S.	Capouse,	Lackawanna,		Leg fractured by fall of roof at face of chamber.
	28	John Leonard,	Irish,	Company man,	45	S.	Hyde Park,			Injured by falling from railroad car. Outside.
June	9	Joseph Jones,	Welsh,	Runner,	18	S.	Sloan,			Injured by mine cars.
	9	Frank Lutze,	Polish,	Laborer,	37	M.	Sloan,			Face cut by falling against rock.
	10	Conrad Mang, Jr.,	American,	Driver,	17	S.	Sloan,			Injured by falling from back of a mule. Outside.
	12	Stanley Paunek,	Polish,	Laborer,	20	S.	National,			Leg fractured by fall of roof at face of chamber.
	17	William Shepherd,	American,	Company man,	28	M.	Hyde Park,			Leg fractured by cars on gangway road.
	18	David Lewis,	American,	Driver,	28	S.	Hampton,			Kicked by a mule.
	29	Thomas McFighe,	American,	Driver,	18	S.	Continental,			Knee bumped between two cars on gangway.
	29	John Shiniski,	Polish,	Miner,	35	M.	Dodge,			Injured by fall of roof at face of a neighbor's chamber.
July	8	Joseph Youselas,	Lithuanian,	Laborer,	26	S.	Hyde Park,			Slightly injured by fall of rock at face of chamber.
	15	Morris Jones,	Welsh,	Miner,	45	M.	Hampton,			Arm fractured by fall of roof at face of chamber.
	19	Ira Jones,	Welsh,	Doorboy,	17	S.	Capouse,			Leg fractured by cars on gangway.
Aug.	4	Felix Stanchoch,	Polish,	Laborer,	30	M.	Continental,			Leg fractured by fall of roof at face of chamber.
	6	James Williams,	Welsh,	Motorman,	24	S.	Hyde Park,			Injured while crossing in front of moving motor on gangway.

TABLE 5—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Colliery	County	Nature and Cause of Accident in Brief
Aug. 11	William Oliver,	American,	Laborer,	40	S.	Greenwood,		Ankle fractured by fall of roof at face of chamber.
13	Thomas R. James.	Welsh,	Timberman,	66	M.	Dodge,		Hand injured by falling roof on gangway.
16	John McGinty,	American,	Doorboy,	16	S.	Hyde Park,		Slightly injured by a kick from a mule.
23	Peter Caponic,	Hungarian,	Loader,	24	S.	Dodge,		Injured by being caught between car and iron chute. Outside.
24	Richard Morris,	Welsh,	Laborer,	40	M.	Continental,		Leg fractured by a piece of rock sliding from gob at face of chamber.
26	Lawrence Kinka,	Polish,	Laborer,	54	M.	Dodge,		Skull fractured by fall of roof at face of chamber.
28	Henry Volk,	Polish,	Laborer,	40	M.	Dodge,		Hip dislocated by fall of roof at face of chamber.
Sept. 21	Isaac Morgan,	Welsh,	Company man,	43	M.	Dodge,		Leg and back injured by a blast.
23	Charles Lockovitz,	Lithuanian,	Laborer,	24	S.	Hyde Park,	Lackawanna,	Hip injured by fall of roof at face of chamber.
25	Albert Chambers,	American,	Engineer,	18	S.	Archbald,		Arm amputated by machinery. Outside.
Oct. 12	John Gill,	Irish,	Laborer,	24	S.	Capouse,		Seriously injured by fall of roof in pillar robbing.
20	Lewis Newman,	Swedish,	Laborer,	26	S.	Hyde Park,		Injured by falling roof rock at face of chamber.
28	Alexander Pastvichich,	Polish,	Laborer,	26	S.	Dodge,		Ankle injured by fall of roof at face of chamber.
29	Stanley Protoski,	Polish,	Laborer,	31	M.	Oxford,		Injured by a premature blast at face.
30	John A. Johnson,	Swedish,	Miner,	34	M.	Hyde Park,		Severely injured by a premature blast at face.
Nov. 5	John P. Duffy,	Irish,	Laborer,	29	S.	Greenwood,		Injured by walking into shaft. He had no light.
10	Patrick McDonnell,	Irish,	Miner,	30	M.	Capouse,		Seriously injured by fall of roof at face of chamber.
15	Anthony Dabltsosky,	Polish,	Laborer,	25	S.	Central,		Back broken by fall of roof at face of chamber.

Dec.	3	Mike Beegan,	Polish,	Laborer,	26	M.	Bellevue Washery,			Fell under moving railroad cars. Outside.
	7	George Race,	Polish,	Driver,	18	S.	Archbald,			Fell under moving cars while riding on bumpers on gangway road.
	8	W. J. Edwards,	American,	Fireman,	36	M.	Hampton,			Scalded by escaping steam. Outside.
	9	Patrick Manley,	Irish,	Laborer,	24	S.	Dodge,			Nose injured by flying coal from a blast.
	10	Benjamin Evans,	American,	Driver,	18	S.	Archbald,			Seriously injured by falling under mine cars while riding on bumper on gangway.
	11	Jake Tomerelli,	Italian,	Miner,	35	M.	National,	Lackawanna,		Injured by flying coal from a blast at the face.
	14	Mike Nadok,	Polish,	Laborer,	40	S.	Archbald,			Leg fractured by fall of roof at face of chamber.
	17	John Leach,	Polish,	Laborer,	42	M.	Archbald,			Leg broken. He fell while carrying a lump of coal to car.
	18	Lewis Gibbis,	Lithuanian,	Rockman,	42	M.	Dodge,			Injured by a blast at face of tunnel.
	22	John Moran,	Irish,	Rockman,	32	M.	Dodge,			Leg injured. Struck by haulage rope.
	27	Victor Racgue,	Lithuanian,	Miner,	30	S.	Bellevue,			Injured by a premature blast induced by ignited blower of gas.
	27	Alexander Leverig,	Lithuanian,	Miner,	38	M	Bellevue,			Injured by flying coal from blast at face.

CONDITION OF COLLIERIES

DELAWARE, LACKAWANNA AND WESTERN RAILROAD COMPANY

Bellevue.—Ventilation, drainage and condition as to safety, good.
Dodge.—Ventilation, drainage and condition as to safety good.
Holden.—Ventilation, drainage and condition as to safety good.
National.—Ventilation, drainage and condition as to safety good.
Archbald.—Ventilation, drainage and condition as to safety good.
Continental.—Ventilation, drainage and condition as to safety good.
Hyde Park.—Ventilation, drainage and condition as to safety good.
Hampton.—Ventilation, drainage and condition as to safety good.
Sloan.—Ventilation, drainage and condition as to safety good.

DELAWARE AND HUDSON COMPANY

Greenwood.—The ventilation where fans are in use is good. In the openings where natural causes are depended upon the quantity is a variable one, but sufficient to maintain a healthy condition. Drainage fair, and condition as to safety good.

SCRANTON COAL COMPANY

Capouse.—Ventilation, drainage and condition as to safety good.

PEOPLES COAL COMPANY

Oxford.—Ventilation good; drainage fair; condition as to safety good.

MINOOKA COAL COMPANY

Minooka.—Ventilation, drainage and condition as to safety good.

IMPROVEMENTS

DELAWARE AND HUDSON COMPANY

Greenwood Colliery.—No. 1 plane in the No. 2 Dunmore vein was completed by driving 280 feet and connecting with No. 12 drift workings. No. 2 slope in No. 3 Dunmore vein was extended 260 feet. No. 7 drift in Marcy vein was reopened. An 8-inch bore hole was driven to the Checker vein, 70 feet. A 50,000 gallon tank was erected and service pipes laid for the improvement of the boiler water supply.

MINE FOREMEN'S EXAMINATIONS

The annual examination of applicants for certificates of qualification as Mine Foremen and Assistant Mine Foremen was held in the City Hall, Scranton, June 21 and 22. The Board of Examiners was composed of the following members: H. O. Prytherch, Mine Inspector; John Corcoran, Superintendent, Rendham; James W. Reese, Miner, Scranton; and William J. Jenkins, Miner, Scranton.

The following persons passed a successful examination and were granted certificates:

Mine Foremen

Abraham Pearson, Throop; John E. Morgan, Scranton; Robert While, Coyne; Sanford Phillips, Scranton; Thomas T. Williams, Scranton; William T. Griffiths, Taylor; William Morgan, Scranton; Frank L. Watkins, Scranton; Thomas Davies, Scranton; William J. Williams, Taylor; Edward W. Morgan, Scranton.

Assistant Mine Foremen

William Edwards, Taylor; Thomas W. Jones, Scranton; John E. McHugh, Dunmore; Absalom Williams, Scranton; Robert Roberts, Throop; William J. Reese, Taylor; William Anthony, Scranton; E. J. Caswell, Scranton; John T. Morgan, Scranton; William O. Jones, Scranton; John T. Noone, Scranton; John A. Day, Taylor; Titus Evans, Taylor; William Williams, Throop.



FIFTH DISTRICT

LACKAWANNA, LUZERNE AND SULLIVAN COUNTIES

Scranton, Pa., February 21, 1910.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor to transmit herewith my report as Inspector of Mines for the Fifth Anthracite District, for the year ending December 31, 1909, as required by the Act of April 14, 1903.

Respectfully submitted,

H. D. JOHNSON,
Inspector.

12—23—1909

SUMMARY OF STATISTICS

Number of collieries,	16
Number of mines,	31
Number of mines in operation,	31
Number of tons of coal shipped to market,	3,594,221
Number of tons used at mines for steam and heat,	258,858
Number of tons sold to local trade and used by employes,	48,308
Number of tons produced,	3,901,387
Number of tons produced by compressed air machines,	.....
Number of tons produced by electrical machines,	314,219
Number of persons employed inside of mines,	5,932
Number of persons employed outside,	2,092
Number of fatal accidents inside of mines,	18
Number of fatal accidents outside,	2
Number of non-fatal accidents inside of mines,	36
Number of non-fatal accidents outside,	5
Number of tons of coal produced per fatal accident inside,	216,744
Number of persons employed per fatal accident inside,	330
Number of persons employed per fatal accident outside,	1,046
Number of persons employed per non-fatal accident inside,	164
Number of persons employed per non-fatal accident outside,	418
Number of wives made widows,	10
Number of children made orphans,	39
Number of steam locomotives used inside of mines,	1
Number of steam locomotives used outside,	12
Number of compressed air locomotives used inside,	.....
Number of compressed air locomotives used outside,	.....
Number of electric motors used inside,	66
Number of electric motors used outside,	.....
Number of fans in use,	21
Number of furnaces in use,	1
Number of gaseous mines in operation,	13
Number of non-gaseous mines in operation,	18
Number of new mines opened,	.....
Number of old mines abandoned,	1

TABLE A

PRODUCTION OF COAL

Names of Operators	Tons
Pennsylvania Coal Company,	1,131,513
Delaware, Lackawanna and Western Railroad Company,	779,570
Jermyn and Company,	763,126
Connell Anthracite Mining Company,	314,219
Elliott McClure and Company,	300,879
Hillside Coal and Iron Company,	223,754
Northern Anthracite Coal Company,	155,623
Hudson Coal Company,	109,651
O'Boyle-Foy Anthracite Coal Company,	93,695
Austin Coal Company,	18,434
Randall and Schaad Brothers Anthracite Coal Company, Limited,	8,977
Brookside Coal Company,	1,946
Total,	3,901,387

Production by Counties

Lackawanna,	2,562,729
Luzerne,	766,144
Sullivan,	572,514
Total,	3,901,387

TABLE B.—Fatal and non-fatal accidents inside and outside of mines; number of tons of coal produced per accident; number of persons employed; number employed per accident

Names of Operators	Fatal Accidents			Non-Fatal Accidents			Tons of coal produced per fatal accident inside	Tons of coal produced per non-fatal accident inside	Number of employes inside	Number of employes outside	Total number of employes	Number of employes inside per fatal accident	Number of employes outside per fatal accident	Number of employes inside per non-fatal accident	Number of employes outside per non-fatal accident
	Inside	Outside	Total	Inside	Outside	Total									
Pennsylvania Coal Co.,	5	.....	5	8	.....	8	226,303	141,439	1,592	538	2,130	318	.....	199	.....
Delaware, Lackawanna and Western Railroad Co.,	2	.....	2	13	1	14	389,785	59,967	1,528	458	1,986	764	.....	117	458
Jermyn and Co.,	6	2	8	4	1	5	127,187	190,781	885	310	1,195	147	155	221	310
Connell Anthracite Mining Co.,	.....	.....	.....	3	.....	3	.....	104,739	326	139	465	.....	.....	109	.....
Elliott McClure and Co.,	1	.....	1	6	.....	6	300,879	50,146	528	164	692	528	.....	88	.....
Hillside Coal and Iron Co.,	1	.....	1	.....	1	1	223,754	.....	353	117	470	353	.....	.....	117
Northern Anthracite Coal Co.,	2	.....	2	1	.....	1	77,811	155,623	142	92	234	71	.....	142	.....
Hudson Coal Co.,	.....	.....	.....	1	2	3	.....	109,651	322	145	467	.....	.....	322	72
Austin Coal Co.,	1	.....	1	.....	.....	.....	18,434	.....	63	39	102	63	.....	.....	.....
Miscellaneous Companies,	.....	.....	.....	.....	.....	.....	.....	.....	193	90	283	.....	.....	.....	.....
Totals and averages for district..	18	2	20	36	5	41	216,744	108,372	5,932	2,092	8,024	330	1,046	164	418

TABLE C.—Classification of Fatal Accidents Inside and Outside of Mines

	Months													
	January	February	March	April	May	June	July	August	September	October	November	December	Totals	Percentages
Causes of Accidents Inside														
Falls of coal,										1	1		2	11.11
Falls of roof,	1			2	1	2		1		2	1	2	12	66.67
Mine cars,		2				1							3	16.67
Blasts, premature and otherwise,									1				1	5.55
Totals,	1	2		2	1	3		1	1	3	2	2	18	100.00
Causes of Accidents Outside														
Suffocation in chutes, etc.,			1									1	2	100.00
Totals,			1									1	2	100.00
Grand totals inside and outside,	1	2	1	2	1	3		1	1	3	2	3	20	

TABLE D.—Classification of Non-Fatal Accidents Inside and Outside of Mines

	Months													
	January	February	March	April	May	June	July	August	September	October	November	December	Totals	Percentages
Causes of Accidents Inside														
Falls of coal,			1	1				1		2	1		6	16.67
Falls of roof,	2	2			2	1	1			1	1		10	27.78
Mine cars,	2			1		1		1	1	1		2	9	25.00
Explosions of gas,			1										1	2.78
Explosions of powder and dynamite,		1											1	2.78
Blasts, premature and otherwise,		1					1						2	5.55
Miscellaneous,				1	1		1				2	2	7	19.44
Totals,	4	4	2	3	3	2	3	2	1	4	4	4	36	100.00
Causes of Accidents Outside														
Cars,				1			1		1				3	60.00
Miscellaneous,							1		1				2	40.00
Totals,				1			2		2				5	100.00
Grand totals inside and outside,	4	4	2	4	3	2	5	2	3	4	4	4	41	

TABLE E.—Occupations of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Inside													
Miners,	1			2		2			1	2	1	1	10
Miners' laborers,		1			1	1		1		1	1	1	7
Brakemen,		1											1
Totals,	1	2		2	1	3		1	1	3	2	2	18
Outside													
Laborers,			1										1
Shovelers,												1	1
Totals,			1									1	2
Grand totals inside and outside,	1	2	1	2	1	3		1	1	3	2	3	20

TABLE F.—Occupations of Persons Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Inside													
Assistant mine foremen,			1										1
Miners,		3	1	3	1	2	2	1		2	1	1	17
Miners' laborers,	2	1					1				2		6
Drivers and runners,								1		1		2	4
Pumpmen,										1			1
Company men,												1	1
Motormen,	2												2
Brakemen,									1				1
Rockmen,					1								1
Electricians,					1								1
Footmen,											1		1
Totals,	4	4	2	3	3	2	3	2	1	4	4	4	36
Outside													
Laborers,				1			1						2
Slatepicker bosses,							1						1
Shaftmen,									1				1
Trackmen,									1				1
Totals,				1			2		2				5
Grand totals inside and outside,	4	4	2	4	3	2	5	2	3	4	4	4	41

TABLE G.—Nationality of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
American,										2		1	3
Polish,	1	2		1	1	3		1	1		2	1	13
Italian,			1	1								1	3
Austrian,										1			1
Totals,	1	2	1	2	1	3		1	1	3	2	3	20

TABLE H.—Nationality of Persons Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
American,				1		1	1		2	1	1		7
Welsh,	1		1	1									3
Irish,	1		1		1	1	1	1		1			7
German,				1									1
Polish,	2	3		1	1		2	1		2	3	4	19
Italian,		1			1				1				3
Slavonian,							1						1
Totals,	4	4	2	4	3	2	5	2	3	4	4	4	41

TABLE I.—Operators and mines, kind of openings, type and size of fans, size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents and number of persons employed inside

Names of Operators and Mines	Kind of opening	Gaseous or non-gaseous	Method of ventilation	Diameter of fan in feet and inches	Width of blades in feet and inches	Depth of blades in feet and inches	Number of revolutions per minute	Water gauge developed—in inches	Name of fan	Power used	Area of furnace bars in square feet	Number of splits of air currents	Number of cubic feet of air per minute entering the mine at inlet	Total quantity of air per minute circulating in all the splits in cubic feet	Number of cubic feet per minute passing out at outlet	Number of persons employed inside
Pennsylvania Coal Co.																
Old Forge Colliery:																
No. 1 shaft,	Shaft,	Gaseous,	Fan,	20	5	5	52	.9	Guibal,	Steam,		5	65,460	57,050	75,050	207
No. 1 slope,	Slope,	Gaseous,	Fan,	17	4.5	4.5	60	.5	Guibal,	Steam,		2	39,710	36,750	57,800	104
No. 2 shaft,	Shaft,	Non-gas.,	Fan,	20	6.5	5.3	75	.9	Guibal,	Electricity,		6	87,020	76,020	94,900	166
Mountain tunnel (Clark vein),	Drift,	Non-gas.,	Fan,	20	6.5	5.4	50	.5	Guibal,	Electricity,		5	67,270	58,420	74,835	216
Mountain tunnel (Marcy vein),	Drift,											4	66,360	57,490	73,435	214
Central Colliery:																
Laws shaft,	Shaft,	Gaseous,	Fan,	20	6.5	5.45	50	.5	Guibal,	Steam,		3	47,730	33,550	63,580	132
Laws slope,	Slope,											3	27,701	14,970	31,000	162
No. 13 shaft,	Shaft,	Gaseous,	Fan,	20	6.5	5.5	60	.6	Guibal,	Steam,		2	47,000	38,900	102,000	110
Delaware, Lackawanna and Western Railroad Co.																
Pyne Colliery:																
Pyne shaft,	Shaft,	Gaseous,	Fan,	16	5	4.5	125	1.3	Guibal,	Steam,		12	149,875	140,895	157,050	592
Taylor Colliery:																
Taylor shaft,	Shaft,	Gaseous,	Fan,	25	8	7	66	1.8	Guibal,	Steam,		11	264,332	168,195	286,300	559
Taylor slope,	Slope,															
Hallstead Colliery:																
Hallstead shaft,	Shaft,	Gaseous,	Fan,	18	4	6.4	108	1.8	Guibal,	Steam,		10	106,490	87,600	140,200	377

Jermyn and Co.																
Jermyn Colliery:	Slope,	Gaseous,	Fan,	14	4.5	4	90	1.1	Guibal,	Steam,		6	88,032	*	103,979	
Jermyn No. 1,	Shaft,															
Jermyn No. 2,	Shaft,	Gaseous,	Fan,	18	4.25	6	90	1.0	Guibal,	Steam,		4	38,800	35,350	41,410	885
Jermyn No. 3,	Shaft,	Gaseous,	Fan,	18	4.5	4	90	1.0	Guibal,	Steam,		4	35,750	*	55,290	
Jermyn No. 2,	Slope,	Non-gas.,	Furnace,									32	1	16,300	12,050	17,600
Connell Anthracite Mining Co.																
Connells Colliery:																
Connells,	Drift,	Non-gas.,	Fan,	16	4	4	100	.2	Guibal,	Steam,		4	70,500	58,300	74,500	326
Elliott McClure and Co.																
Sibley Colliery:	Shaft,	Non-gas.,	Fan,	20	6	5	70	1.5	Guibal,	Steam,		9	121,273	120,000	123,447	528
Sibley,	Slope,															
Hillside Coal and Iron Co.																
Consolidated Colliery:																
Consolidated,	Shaft,	Non-gas.,	Natural,									1	18,924	16,436	19,932	28
Consolidated,	Slope,	Non-gas.,	Fan,	140	4.0	4.0	85	.6	Guibal,	Steam,		4	24,995	23,085	26,275	70
Northern Anthracite Coal Co.																
Murrays Colliery:																
Murrays,	Shaft,	Non-gas.,	Fan,	16	5	6	85	1.4	Guibal,	Steam,		3	73,300	73,100	73,300	142
Hudson Coal Co.																
Spring Brook Colliery:																
Spring-Brook No. 1,	Slope,	Non-gas.,	Fan,	12	3	4	90	.5	Guibal,	Steam,		1	19,520	11,340	20,400	29
Spring-Brook No. 2,	Slope,	Non-gas.,	Fan,	15	4.5	4.8	120	.2	Guibal,	Steam,		2	39,870	20,400	43,020	9
Spring-Brook No. 2,	Drift,	Non-gas.,	Natural,									1	10,000	8,500	12,000	20
Langeliff Colliery:																
Langeliff,	Shaft,	Non-gas.,	Fan,	17	5	6	60	.2	Guibal,	Steam,		5	79,200	*	54,200	168
Langeliff No. 1,	Drift,	Non-gas.,	Natural,									1	14,800	13,600	16,200	34
O'Boyle-Foy Anthracite Coal Co.																
O'Boyle-Foys Colliery:																
O'Boyle-Foys,	Shaft,	Non-gas.,	Fan,	18	6	6	70	5	Guibal,	Steam,		3	77,500	85,000	93,000	165
Austin Coal Co.																
Austin Colliery:																
Austin,	Tunnel,	Non-gas.,	Natural,									3	33,000	19,600	34,000	63
Randall and Schaad Brothers Anthracite Coal Co., Limited																
Randall and Schaads Colliery:																
Randall and Schaads,	Slope,	Non-gas.,	Fan,	6	1.33	2.33	400	.7	Smiths,	Steam,		1	16,500	16,500	18,000	25

*"Robbing."

TABLE 1.—Operators, location of collieries, railroads, etc.

Names of Operators and Collieries	County	Name of General Superintendent	Post Office	Name of Superintendent	Post Office	Railroad to Mine
Pennsylvania Coal Co.						
Old Forge,	Lackawanna,	W. W. Inglis,	Scranton,	J. P. Jennings,	Moosic,	Erie.
Central,	Luzerne,					
Delaware, Lackawanna and Western Railroad Co.						
Pyne,	Lackawanna,	R. A. Phillips,	Scranton,	T. J. Williams,	Scranton,	D. L. and W.
Taylor,	Lackawanna,			E. J. Evans,		
Hallstead,	Luzerne,					
Jermyn and Co.						
Jermyn Nos. 1 and 2,	Lackawanna,	E. B. Jermyn,	Scranton,	John P. Corcoran,	Old Forge,	Erie.
Connell Anthracite Mining Co.						
Connells,	Sullivan,	W. L. Connell,	Scranton,			Lehigh Valley.
Elliott McClure and Co.						
Sibley,	Lackawanna,	R. W. Reese,	Rendham,			D. L. and Lehigh Valley.
Hillside Coal and Iron Co.						
Consolidated,	Luzerne,	W. W. Inglis,	Scranton,	J. P. Jennings,	Moosic,	Erie.
Northern Anthracite Coal Co.						
Murrays,	Sullivan,	M. J. Murray, Sr.,	Dunmore,	P. J. Murray,	Lopez,	Lehigh Valley.
Hudson Coal Co.						
Spring Brook,	Lackawanna,	C. C. Rose,	Scranton,	E. R. Pettebone,	Dorranceton,	Delaware and Hudson.
Langcliff,	Luzerne,					
O'Boyle-Foy Anthracite Coal Co.						
O'Boyle-Foys,	Sullivan,	M. W. O'Boyle,	Pittston,	M. J. Clemmons,	Murray,	Lehigh Valley.
Austin Coal Co.						
Austin,	Lackawanna,	W. G. Robertson,	Scranton,	John J. Cosgrove,	Old Forge,	Lehigh Valley.

Randall and Schaad Brothers Anthracite Coal Co., Limited Randall and Schaads,	Sullivan,	W. J. Schaad,	Mildred,	W. J. Schaad,	Mildred,	Lehigh Valley.
Brookside Coal Co. Brookside Washery,	Lackawanna,	M. F. Dolphin,	Moosic,	M. F. Dolphin,	Moosic,	D. L. and W.

TABLE 2.--Number of tons of coal mined, number of days worked, number of persons employed, number killed and injured, quantity of powder, dynamite and so-called safety explosives used, etc.

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Explosives: Number of pounds of powder used	Explosives: Number of pounds of dynamite used	Number of horses and mules
Pennsylvania Coal Co.												
Old Forge,	Lackawanna,	686,158	49,375	.....	735,533	251	1,338	4	4	777,200	13,510	15
Central,	Luzerne,	334,655	21,123	5,787	361,565	242	757	1	4	323,200	5,559	52
		1,020,813	70,498	5,787	1,097,098	.....	2,095	5	8	1,100,400	19,069	67
Washeries												
Old Forge,	Lackawanna,	2,780	450	.....	3,230	6	(a)	----	----	.....	.....	.....
Central,	Luzerne,	30,039	1,146	.....	31,185	45	35	----	----	.....	.....	.....
		32,819	1,596	.....	34,415	.....	35	----	----	.....	.....	.....
Totals,	.....	1,053,632	72,094	5,787	1,131,513	.....	2,130	5	8	1,100,400	19,069	67
Delaware, Lackawanna and Western Railroad Co.												
Pyne,	Lackawanna,	234,798	4,705	1,123	240,626	153	757	2	2	207,250	1,070	40
Taylor,	Lackawanna,	385,679	11,972	7,756	405,407	276	725	----	10	411,000	2,436	25
Hallstead,	Luzerne,	58,429	12,523	1,198	72,150	123	477	----	2	111,900	14,504	62
		678,906	29,200	10,077	718,183	....	1,959	2	14	730,150	18,010	136
Pyne Washery,	Lackawanna,	42,592	18,795	.....	61,387	148	27	----	----	.....	.....	.....
Totals,	.....	721,498	47,995	10,077	779,570	.....	1,986	2	14	730,150	18,010	136

(a) Included with Colliery.

Jermyn and Co.											
Jermyn Nos. 1 and 2,		318,736	28,014	3,098	349,848	216	1,116	8	5	411,750	6,850	83
Washeries												
Jermyn No. 1,	Lackawanna,	228,224	----------	82	228,306	255	42	----	----	----------	----------	------
Jermyn No. 2,		165,588	13,624	5,760	184,972	252	37	----	----	----------	----------	------
		393,812	13,624	5,842	413,278	------	79	----	----	----------	----------	------
Totals,		712,548	41,638	8,940	763,126	------	1,195	8	5	411,750	6,850	83
Connell Anthracite Mining Co.												
Connells,	Sullivan,	284,812	27,375	2,032	314,219	254	465	----	3	70,000	14,000	7
Elliott McClure and Co.												
Sibley,	Lackawanna,	267,573	24,820	8,486	300,879	253	692	1	6	390,225	18,812	50
Hillside Coal and Iron Co.												
Consolidated,	Luzerne,	202,803	14,129	3,719	220,651	222	470	1	1	216,025	5,058	59
Consolidated Washery,	Luzerne,	3,103	----------	----------	3,103	31	(a)	----	----	----------	----------	------
Totals,		205,906	14,129	3,719	223,754	------	470	1	1	216,025	5,058	59
Northern Anthracite Coal Co.												
Murrays,	Sullivan,	148,400	5,200	2,023	155,623	107	234	2	1	125,875	1,000	29
Hudson Coal Co.												
Spring Brook,	Lackawanna,	24,501	6,634	1,026	32,161	67	124	----	----	1,146	456	28
Langcliff,	Luzerne,	66,013	9,782	1,695	77,490	104	343	----	3	3,787	5,493	62
Totals,		90,514	16,416	2,721	109,651	------	467	----	3	4,933	5,949	90
O'Boyle-Foy Anthracite Coal Co.												
O'Boyle-Foys,	Sullivan,	86,599	5,511	1,585	93,695	186	233	----	----	69,075	350	18
Austin Coal Co.												
Austin,	Lackawanna,	13,930	2,600	1,904	18,434	85	102	1	----	484	219	10
Randall and Schaad Brothers Anthracite Coal Co., Limited												
Randall and Schaads,	Sullivan,	7,383	1,000	594	8,977	143	31	----	----	12,450	----------	4
Brookside Coal Co.												
Brookside Washery,	Lackawanna,	1,426	80	440	1,946	38	19	----	----	----------	----------	------
Grand totals,		3,594,221	258,858	48,308	3,901,387	------	8,024	20	41	3,131,367	89,317	553

(a) Included with Colliery.

TABLE 2 —Part 2.

Names of Operators	County	Number of Boilers					Locomotives			Number of steam engines of all classes	Total horse power	Number of pumps delivering water to surface	Capacity in gallons per minute	Quantity delivered to surface per minute-gallons	Number of electric dynamos	Number of air compressors
		Cylindrical	Horse power	Tubular	Horse power	Total horse power	Steam	Air	Electric							
Pennsylvania Coal Co.,	Lackawanna, Luzerne,	----	----	25	5,150	5,150	6	----	39	38	5,300	13	14,836	8,300	4	1
Delaware, Lackawanna and Western Railroad Co.,	Lackawanna, Luzerne,	23	460	21	3,540	4,000	2	----	17	55	3,756	8	10,630	4,660	3	----
Jermyn and Co.,	Lackawanna,	15	300	7	1,050	1,350	----	----	----	28	2,122	2	10,000	7,000	----	----
Connell Anthracite Mining Co.,	Sullivan,	----	----	6	1,600	1,600	----	----	10	11	1,230	1	600	500	4	----
Elliott McClure and Co.,	Lackawanna,	----	----	3	1,200	1,200	----	----	----	21	1,100	2	3,500	1,800	----	1
Hillside Coal and Iron Co.,	Luzerne,	----	----	6	900	900	2	----	----	10	750	1	600	500	----	1
Northern Anthracite Coal Co.,	Sullivan,	----	----	5	450	450	----	----	----	5	400	1	1,174	587	----	----
Hudson Coal Co.,	Lackawanna, Luzerne,	9	270	10	1,235	1,505	2	----	----	34	1,242	6	4,200	1,700	----	1
O'Boyle-Foy Anthracite Coal Co.,	Sullivan,	----	----	2	550	550	----	----	----	8	450	1	100	70	----	----
Austin Coal Co.,	Lackawanna,	7	140	3	450	590	1	----	----	8	270	1	550	200	----	1
Randall and Schaad Brothers Anthracite Coal Co., Limited,	Sullivan,	----	----	1	80	80	----	----	----	2	60	1	200	200	----	----
Brookside Coal Co.,	Lackawanna,	----	----	4	250	250	----	----	----	4	160	----	----	----	----	----
Totals,	----	54	1,170	89	16,455	17,625	13	----	66	224	16,840	37	46,390	25,517	11	5

TABLE 3.—Number of each class of employes inside and outside of mines

Names of Operators	County	Inside											Outside										Grand total inside and outside
		Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Doorboys and helpers	Pumpmen	Company men	All other employes	Total inside	Superintendents	Foremen	Blacksmiths and carpenters	Engineers and firemen	Slate pickers (boys)	Slate pickers (men)	Bookkeepers and clerks	All other employes	Total outside	
Pennsylvania Coal Co.,	Luzerne, Lackawanna,	5	11	....	613	523	49	50	14	168	159	1,592	1	2	23	41	181	64	5	221	538	2,130
Delaware, Lackawanna and Western Railroad Co.,	Lackawanna, Luzerne,	4	2	12	544	525	108	24	12	44	253	1,528	....	4	19	55	119	8	9	244	458	1,986
Jermyn and Co.,	Lackawanna,	2	2	8	304	334	99	39	6	91	.....	885	2	2	16	33	79	27	8	143	310	1,195
Connell Anthracite Mining Co.,	Sullivan,	1	1	....	138	91	.....	5	9	14	67	326	1	1	10	13	26	8	3	77	139	465
Elliott McClure and Co.,	Lackawanna,	1	4	....	190	157	80	15	4	59	18	528	1	1	6	7	68	12	2	67	164	692
Hillside Coal and Iron Co.,	Luzerne,	2	1	....	148	119	43	7	1	25	7	353	....	1	7	13	29	8	1	58	117	470
Northern Anthracite Coal Co.	Sullivan,	1	....	....	56	56	1	8	1	15	4	142	1	1	3	5	9	20	3	50	92	234
Hudson Coal Co.,	Lackawanna, Luzerne,	2	1	1	102	130	54	2	3	23	4	322	....	2	9	22	25	13	4	70	145	467
O'Boyle-Foy Anthracite Coal Co.,	Sullivan,	1	....	....	68	46	11	6	2	15	23	172	1	1	3	5	17	14	1	19	61	233
Austin Coal Co.,	Lackawanna,	1	....	....	21	21	5	.....	2	2	11	63	1	1	4	7	9	4	1	12	39	102
Randall and Schaad Brothers Anthracite Coal Co., Ltd.,	Sullivan,	1	1	....	15	.....	2	1	.....	1	.....	21	1	....	1	2	3	1	....	2	10	31
Brookside Coal Co.,	Lackawanna,	....	....	....	.....	.....	.....	.....	.....	.....	.....	.....	....	1	1	2	3	.....	1	11	19	19
Totals,		21	23	21	2,199	2,002	452	157	54	457	546	5,932	9	17	102	205	568	179	38	974	2,092	8,024

TABLE 3.—Part 2

Names of Operators	County	Average Number of Days Worked in Breaker												
		January	February	March	April	May	June	July	August	September	October	November	December	Total
Pennsylvania Coal Co.,	Lackawanna, Luzerne,	17	20	23	21	21	20	14	15	21	24	24	26	246
Delaware, Lackawanna and Western Railroad Co.,	Lackawanna, Luzerne,	12	10	17	17	18	18	13	13	13	14	16	23	184
Jermyn and Co.,	Lackawanna,	16	20	23	9	20	20	15	15	20	16	21	21	216
Connell Anthracite Mining Co.,	Sullivan,	21	17	15	21	24	20	21	24	19	26	22	24	254
Elliott McClure and Co.,	Lackawanna,	22	18	24	20	6	22	22	24	24	24	23	24	253
Hillside Coal and Iron Co.,	Luzerne,	17	20	24	18	18	18	14	11	18	19	22	23	222
Northern Anthracite Coal Co.,	Sullivan,	17	15	15	15	10	9	9	7	13	17	18	22	167
Hudson Coal Co.,	Lackawanna, Luzerne,	9	8	10	10	9	7	6	5	2	3	9	8	86
O'Boyle-Foy Anthracite Coal Co.,	Sullivan,	16	18	12	14	9	16	9	13	20	17	19	23	186
Austin Coal Co.,	Lackawanna,	16	14	5	3	4	4	6	7	5	6	7	8	85
Randall and Schaad Brothers Anthracite Coal Co., Limited,	Sullivan,	19	20	13	------	------	------	------	------	16	25	24	26	143

TABLE 4.—Fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Colliery	County	Nature and Cause of Accident in Brief
Jan. 22	Theodore Samansky,	Polish,	Miner,	38	M.	1	5	Murrays,	Sullivan,	Spine, skull and leg fractured by fall of roof at face. Died next day.
Feb. 1	John Latisky,	Polish,	Brakeman,	21	S.			Old Forge,	Lackawanna,	Ribs fractured by being struck by cars at a branch of two gangway roads.
11	Joe Andrewoskie,	Polish,	Laborer,	27	M.	1		Old Forge,	Lackawanna,	Limbs broken. Crushed by a runaway trip on gangway near airway branch.
March 25	Sam Ross,	Italian,	Laborer,	22	S.			Jermyns Nos. 1 and 2.	Lackawanna,	Smothered by being caught in a rush of culm. Outside.
April 10	Feliciano Fransconi,	Italian,	Miner,	24	S.			Old Forge,	Lackawanna,	Killed by fall of bony at the face of his chamber while robbing.
24	Joseph Mohan,	Polish,	Miner,	42	M.	1	7	Pyne,	Lackawanna,	Killed by fall of bony at the face of his chamber while mining top coal.
May 22	Wassel Marchinock,	Polish,	Laborer,	38	M.	1	4	Jermyns Nos. 1 and 2.	Lackawanna,	Killed by fall of roof at the working face.
June 2	Stanley Nosick,	Polish,	Miner,	41	M.	1	4	Jermyns Nos. 1 and 2.	Lackawanna,	Crushed between mine car and working face. Died June 3.
14	John Fayokavage,	Polish,	Laborer,	37	M.	1	2	Pyne,	Lackawanna,	Crushed by fall of rock at the face while robbing pillars.
25	Alex. Sowka,	Polish,	Miner,	33	M.	1		Jermyns Nos. 1 and 2.	Lackawanna,	Killed by fall of top rock at the face of his place. His skull was fractured.
Aug. 31	Joseph Olcesky,	Polish,	Laborer,	28	S.			Austin,	Lackawanna,	Killed by fall of roof at the face while robbing pillars.
Sept. 17	George Shekelsky,	Polish,	Miner,	31	M.		5	Central,	Luzerne,	Skull fractured by a blast as he approached his working face.
Oct. 1	James Walsh,	American,	Miner,	43	M.	1	2	Consolidated,	Luzerne,	Back and hip bruised and spine injured by fall of rock at the face while robbing pillars. Died October 16.
6	Stanley Bodinstoke,	Austrian,	Laborer,	25	S.			Jermyns Nos. 1 and 2.	Lackawanna,	Killed by fall of rock at a cross-cut near the face in the place next to his.
7	Charles Weinert,	American,	Miner,	43	M.	1	5	Murrays,	Sullivan,	Killed by fall of top bench coal at the face of his place.
Nov. 3	George Solborn,	Polish,	Miner,	40	M.	1	2	Jermyns Nos. 1 and 2.	Lackawanna,	Back broken by fall of rock at his working face.

TABLE 4—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Colliery	County	Nature and Cause of Accident in Brief
Nov. 10	Alek. Milgick,	Polish,	Laborer,	21	S.			Sibley,	Lackawanna,	Killed by fall of coal on gangway road near mouth of chamber.
Dec. 7	George Smith,	American,	Shoveler,	23	S.			Jermyns Nos. 1 and 2.	Lackawanna,	Smothered by being drawn in coal pocket in breaker. Outside.
28	Joe Mayonnick,	Polish,	Miner,	37	M.		3	Jermyns Nos. 1 and 2.	Lackawanna,	Killed by fall of rock at his face in a section that was being robbed.
30	Charles Appidilla,	Italian,	Laborer,	34	S.			Old Forge,	Lackawanna,	Killed by fall of top rock at the corner of a pillar near the face.

TABLE 5.—Non-fatal accidents inside and outside of mines

Date	Name of Person	Nationality	Occupation	Age	Married or single	Name of Colliery	County	Nature and Cause of Accident in Brief
Jan. 9	Edw. Coxkus,	Polish,	Laborer,	26	M.	Jermyns Nos. 1 and 2,	Lackawanna,	Leg broken by fall of roof rock at the working face.
25	Benj. Davis,	Welsh,	Motorman,	22	S.	Taylor,	Lackawanna,	Hips squeezed by cars in the face of a chamber.
29	Luke Supp,	Polish,	Laborer,	27	S.	Connells,	Sullivan,	Leg broken by fall of rock at the face.
29	Robt. Ryan,	Irish,	Motorman,	19	S.	Central,	Luzerne,	Compound fracture of leg by cars. Two trains collided on gangway road.
Feb. 6	John Maurchuck,	Polish,	Miner,	49	M.	Jermyns Nos. 1 and 2,	Lackawanna,	Leg broken by fall of roof at the face.
11	Christian Barlott,	Italian,	Miner,	28	S.	Connells,	Sullivan,	Burned by powder.
11	Frant Sutt,	Polish,	Laborer,	57	S.	Connells,	Sullivan,	Leg broken by fall of rock at the face.
11	Walter Dezelinski,	Polish,	Miner,	27	S.	Sibley,	Lackawanna,	Shot by a premature blast.
March 17	Thos. H. Davis,	Welsh,	Asst. Foreman,	31	M.	Taylor,	Lackawanna,	Burned on hand and hip by gas.
23	Thos. Granahan,	Irish,	Miner,	44	M.	Central,	Luzerne,	Hip dislocated and scalp wounded by fall of top coal on the rib near the face.
April 6	Geo. Jacobs,	Polish,	Laborer,	48	M.	Jermyns Nos. 1 and 2,	Lackawanna,	Leg broken by being caught between two cars at foot of breaker shaft. Outside.
17	Frank Cox,	American,	Miner,	49	M.	Murrays,	Sullivan,	Ribs fractured by fall of top bench coal at the face.
19	Wm. Owens,	Welsh,	Miner,	44	M.	Taylor,	Lackawanna,	Leg broken by being struck by a rope on haulage road.
21	Mike Weisenfluh,	German,	Miner,	39	S.	Pyne,	Lackawanna,	Finger amputated by car on chamber road.
May 1	Peter Cosgrove,	Irish,	Electrician,	45	M.	Central,	Luzerne,	Arm broken while swinging a hammer.
20	Nicholas Josephs,	Italian,	Miner,	30	M.	Old Forge,	Lackawanna,	Hip dislocated by fall of roof at the face.
27	John Walsh,	Polish,	Rockman,	45	M.	Sibley,	Lackawanna,	Leg fractured by the fall of a "bell" near the face of chamber.
June 14	Mike Corbett,	Irish,	Miner,	34	M.	Taylor,	Lackawanna,	Bone in toe broken by fall of roof in the cross-cut near the face.
21	Edward Pugh,	American,	Miner,	24	M.	Taylor,	Lackawanna,	Arm broken by being struck by a car on a rope road at the branch.

TABLE 5—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Colliery	County	Nature and Cause of Accident in Brief
July 1	Michael Chilok,	Slavonian,	Laborer,	26	M.	Langcliff,	Luzerne,	Ankle fractured by car on the rock dump at the tipple. Outside.
10	Jos. Gomoida,	Polish,	Miner,	22	S.	Jermyns Nos. 1 and 2,	Lackawanna,	Leg broken. He fell while running from a blast and was struck by flying coal.
20	Edw. Moore,	American,	Slate-boss,	23	S.	Pyne,	Lackawanna,	Shoulder dislocated by being struck by falling timber. Outside.
23	Phillip Snyder,	Polish,	Laborer,	39	M.	Taylor,	Lackawanna,	Knee cap fractured by slipping on the bottom coal.
24	John Coyne,	Irish,	Miner,	44	M.	Taylor,	Lackawanna,	Compound fracture of leg by fall of rock near the face.
Aug. 5	Michael Durkin,	Irish,	Runner,	21	S.	Sibley,	Lackawanna,	Injured about body by being squeezed between car and prop on the slope.
26	Andrew Jen Jeski,	Polish,	Miner,	42	M.	Taylor,	Lackawanna,	Back badly bruised by fall of top bench at the face.
Sept. 11	Joseph Heffron,	American,	Shaftman,	36	M.	Langcliff,	Luzerne,	Kicked by a mule. Outside.
22	Jno. Napried,	Italian,	Trackman,	23	S.	Consolidated,	Luzerne,	Thumb crushed and amputated. He was caught between a car of props and a switch stand. Outside.
25	Dan O'Boyle,	American,	Brakeman,	20	S.	Old Forge,	Lackawanna,	Leg fractured by being caught between cars on the motor road.
Oct. 3	Wesley Mowry,	American,	Pumpman,	56	M.	Sibley,	Lackawanna,	Back bruised and leg broken by fall of a stone on the rib at cross-cut in chamber.
11	Mozan Klumasisha,	Polish,	Miner,	33	M.	Old Forge,	Lackawanna,	Thigh fractured and scalp wounded by fall of top coal at the face.
15	John Zalonis,	Polish,	Driver,	17	S.	Sibley,	Lackawanna,	Compound fracture of leg. He fell under a trip of cars on main haulage road.
25	John Flynn,	Irish,	Miner,	42	M.	Taylor,	Lackawanna,	Leg fractured by fall of top bench at face of his chamber.
Nov. 2	Anth. Ancheski,	Polish,	Laborer,	33	M.	Old Forge,	Lackawanna,	Thigh fractured by fall of top coal at face of his place.

Nov.	2	Reese Williams,	American,	Footman,	21	M.	Hallstead,	Luzerne,	Thigh fractured. He was caught in the sump at foot of shaft by a descending cage.
	15	Geo. Shemo,	Polish,	Miner,	30	M.	Taylor,	Lackawanna,	Leg fractured and head lacerated by fall of roof at face of his place.
	24	Mich. Bolania,	Polish,	Laborer,	38	M.	Sibley,	Lackawanna,	Side and back bruised by a sliding stone on the rib near the face.
Dec.	3	Adam Starkey,	Polish,	Driver,	17	S.	Hallstead,	Luzerne,	Leg injured and knee cut. He was thrown under a car on the gangway.
	6	Joseph Haddock,	Polish,	Miner,	42	M.	Langcliff,	Luzerne,	Ribs fractured and back bruised. He was struck by a falling collar.
	22	Alex. Siluskia,	Polish,	Driver,	19	S.	Central,	Luzerne,	Compound fracture of leg. He was struck by a moving car on a passing branch on main road.
	29	John Sullivan,	Polish,	Company man,	36	M.	Jermyns Nos. 1 and 2,	Lackawanna,	Knee cap broken. He slipped and fell while barring down a rock on chamber road.

CONDITION OF COLLIERIES

PENNSYLVANIA COAL COMPANY

Old Forge.—Ventilation, drainage and condition as to safety good. Colliery is mining pillars to some extent.

Central.—Ventilation, drainage and conditions generally are good.

DELAWARE, LACKAWANNA AND WESTERN RAILROAD COMPANY

Pyne.—Ventilation, drainage and general conditions for safety are good. Colliery is robbing pillars.

Taylor.—Ventilation, drainage and general conditions as to safety are good.

Hallstead.—Ventilation and drainage good; general conditions as to safety fair.

JERMYN AND COMPANY

Jermyn Nos. 1 and 2.—Ventilation and drainage good; general conditions as to safety fair. Colliery robbing pillars almost exclusively.

CONNELL ANTHRACITE MINING COMPANY

Connells.—Ventilation, drainage and general conditions as to safety good.

ELLIOTT McCLURE AND COMPANY

Sibley.—Ventilation and drainage good; conditions generally as to safety good.

HILLSIDE COAL AND IRON COMPANY

Consolidated.—Ventilation, drainage and condition as to safety good. Robbing.

NORTHERN ANTHRACITE COAL COMPANY

Murrays.—Condition as to ventilation, drainage and safety in general, good.

HUDSON COAL COMPANY

Spring Brook.—Condition as to ventilation, drainage and general safety is good. Colliery is robbing pillars exclusively.

Langcliff.—Condition as to ventilation, drainage and safety in general is good. About one-half the present output is from robbing pillars.

O'BOYLE-FOY ANTHRACITE COAL COMPANY

O'Boyle-Foys.—Condition as to ventilation, drainage and safety in general, is good.

AUSTIN COAL COMPANY

Austin Tunnel.—Condition as to drainage, ventilation and general safety, is fair. Colliery is robbing pillars almost exclusively.

RANDALL AND SCHAAD BROTHERS ANTHRACITE COAL COMPANY, LIMITED

Randall and Schaads.—Condition as to drainage, ventilation and general safety is good.

IMPROVEMENTS AT COLLIERIES

PENNSYLVANIA COAL COMPANY

Central Colliery.—At No. 13 shaft a centrifugal pump electrically driven with a capacity of 1,000 gallons per minute has been installed.

A new opening has been driven into the Marcy vein at Laws shaft to give extra facilities for handling coal.

A plant has been erected at Avoca bank, to pick up the culm, load it into railroad cars, and send it to the various washeries for preparation.

OLD FORGE COLLIERIES

A number of machines, such as lathes, wheel-presses, and boring machines have been installed in the shop.

A number of the roads at the Mountain drifts and Old Forge No. 2 shaft have been uniformly graded to provide better haulage roads for the electrical equipment.

DELAWARE, LACKAWANNA AND WESTERN RAILROAD COMPANY

The Pyne Colliery was shut down for extensive repairs to the breaker from July 3 to December 1.

The Pyne Breaker was practically rebuilt. Ten new Emery mechanical slate pickers, 44 spiral separators and 14 shakers were installed.

One breaker, 18 inches x 26 inches Hamilton Corliss engine was installed to replace two old breaker engines. One Jeffrey rock crusher was installed driven by a 50 H. P. electric motor; two new cylinders, 22 inches x 48 inches, were installed on the shaft hoisting engines, operated by two double seated 8-inch throttle boat valves and an extra or emergency valve.

A new system of heating the breaker throughout was installed, also new fire water lines.

The wooden trestle was replaced with a steel structure; a new concrete reservoir, 40 feet in diameter, for boiler feed water was built and also a new brick and concrete fire proof oil house.

A new Jeanesville 18 inch x 34 inch x 36 inch compound condensing plunger pump, capacity 1,500 gallons per minute, was installed near the foot of shaft in a fire proof pump house.

A new air-shaft was sunk from the surface to the Clark vein 12 inches x 14 inches x 300 feet in depth; and a new ventilating fan, Guibal type, 6 feet x 8 feet x 24 feet, was installed on this shaft, driven by 18 inch x 36 inch Hamilton Corliss engine.

There was also installed a new breaker dust fan, 2 feet, 7 inches x 5 feet, 6 inches x 12 inches, to be driven by a 75 H. P. electric motor. All tubing is made of galvanized iron.

CONNELL ANTHRACITE MINING COMPANY

No particular improvements were made in the equipment of the mine or plant except such work as is naturally done, in the normal operation of the mine.

However, much has been done at the working face, in the matter of improved timbering and better ventilation, and a substantial decrease in the mine accidents has resulted.

ELLIOTT McCLURE AND COMPANY

The improvements made at this Colliery were small and consisted of 1 chain car haul, installed in the third Dunmore vein, for the handling of empty cars.

One No. 10 Knowles pump in the No. 2 Dunmore vein, and the sinking of a small shaft from the bottom split of the Clark vein, to the No. 2 Dunmore vein, a distance of 39 feet for the above named pump to discharge through.

One Flory engine 10 inch x 12 inch to hoist the coal from the No. 2 Dunmore to the Clark vein was also installed.

NORTHERN ANTHRACITE COAL COMPANY

Installed a pumping station at Lopez, about one and one quarter miles from their Murray mine, on the Loyal Sock Creek, by which to secure a fresh water supply for the boilers during the dry season.

O'BOYLE-FOY ANTHRACITE COAL COMPANY

Installed a No. 4 Knowles Duplex pump at Birch Creek for the purpose of securing fresh water for their boilers, and connected it with a 2-inch steam line and a 4-inch water line.

AUSTIN COAL COMPANY

One slope was driven across the pitch in the center of the colliery, in the Red Ash vein, a distance of about 1,000.

RANDALL AND SCHAAD BROTHERS

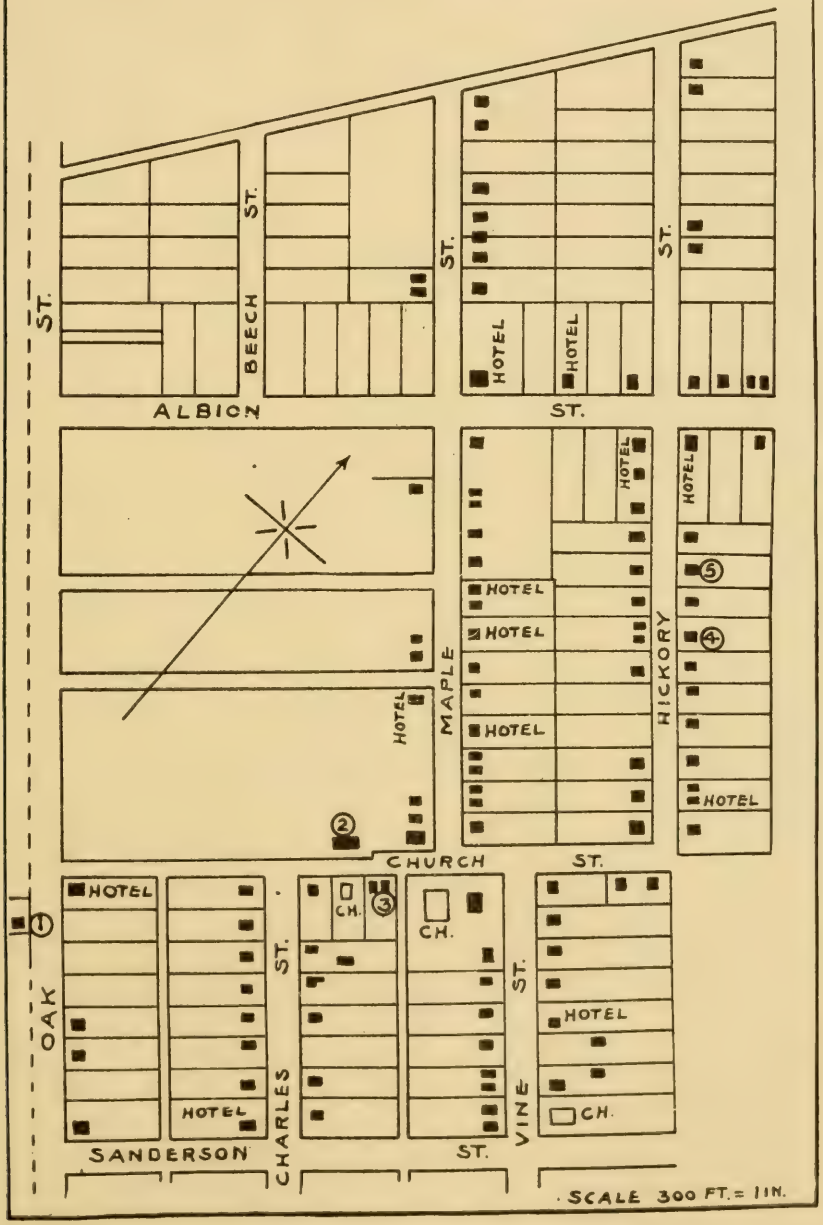
Installed one 80 H. P. return tubular boiler.

ACCIDENTS

During the year six employes of Jermyn and Company lost their lives and in each case it would appear that the accident could have been avoided had the victim used the proper care and intelligence. The victims were all foreigners and five of them lived in a settlement called Little Jerusalem, a village consisting of ninety-nine dwelling houses, ten hotels and three churches, there being one saloon for each ten dwellings. The result of so many drinking places is disastrous to the people in that locality, as the men are constantly under the influence of liquor. Drinking, card playing and carousing at night are their chief diversions. The map attached tells the story

PART OF
OLD FORGE BOROUGH.
LACK. CO. PA.

1 Stanley Bodinstoke.
2 Stanley Nosick.
3 Jos. Mayornick.
4 Alex. Sowka.
5 Wassel Marschniok.



of the six men and points to the reason for their losing their lives. In justice to the company it must be said that they are using every possible means to put a stop to this horrible condition of affairs in the locality mentioned. Ninety per cent. of the work being done in the Jermyn mine is second mining or removing pillars, which is more dangerous than first mining. The work is so arranged that a foreman or assistant foreman is assigned to each twenty places and the places are visited by him three times each day instead of once each alternate day as required by law.



SIXTH DISTRICT

LUZERNE COUNTY

Pittston, Pa., February 19, 1910.

Hon. James E. Roderick, Chief of the Department of Mines:

Sir: I have the honor to transmit herewith my annual report as Inspector of Mines for the Sixth Anthracite District, for the year ending December 31, 1909.

The report contains the usual tables and statistics, with a brief description of the most important improvements made at the collieries, and also a brief description of fatal accidents.

Respectfully submitted,

HUGH McDONALD,
Inspector.

SUMMARY OF STATISTICS

Number of collieries,	13
Number of mines,	39
Number of mines in operation,	35
Number of tons of coal shipped to market,	4,083,421
Number of tons used at mines for steam and heat,	392,706
Number of tons sold to local trade and used by employes,	41,460
Number of tons produced,	4,517,587
Number of tons produced by compressed air machines,	.....
Number of tons produced by electrical machines,	.....
Number of persons employed inside of mines,	7,653
Number of persons employed outside,	2,491
Number of fatal accidents inside of mines,	46
Number of fatal accidents outside,	3
Number of non-fatal accidents inside of mines,	65
Number of non-fatal accidents outside,	9
Number of tons of coal produced per fatal accident inside,	98,208
Number of persons employed per fatal accident inside,	166
Number of persons employed per fatal accident outside,	830
Number of persons employed per non-fatal accident inside,	117
Number of persons employed per non-fatal accident outside,	276
Number of wives made widows,	23
Number of children made orphans,	41
Number of steam locomotives used inside of mines,	.....
Number of steam locomotives used outside,	23
Number of compressed air locomotives used inside,	11
Number of compressed air locomotives used outside,	.....
Number of electric motors used inside,	41
Number of electric motors used outside,	.....
Number of fans in use,	45
Number of furnaces in use,	.....
Number of gaseous mines in operation,	21
Number of non-gaseous mines in operation,	14
Number of new mines opened,	1
Number of old mines abandoned,	1

TABLE A

PRODUCTION OF COAL

Names of Operators	Tons
Pennsylvania Coal Company,	2,877,624
Lehigh Valley Coal Company,	500,982
Hudson Coal Company,	485,055
Hillside Coal and Iron Company,	456,479
Delaware and Hudson Company,	79,455
Traders Coal Company,	78,290
Reliance Coal Co.,	39,702
Total,	4,517,587

Production by Counties

Luzerne,	4,517,587

TABLE B.—Fatal and non-fatal accidents inside and outside of mines; number of tons of coal produced per accident; number of persons employed; number employed per accident

Names of Operators	Fatal Accidents			Non-Fatal Accidents			Tons of coal produced per fatal accident inside	Tons of coal produced per non-fatal accident inside	Number of employes inside	Number of employes outside	Total number of employes	Number of employes inside per fatal accident	Number of employes outside per fatal accident	Number of employes inside per non-fatal accident	Number of employes outside per non-fatal accident
	Inside	Outside	Total	Inside	Outside	Total									
Pennsylvania Coal Co.,	32	1	33	46	6	52	89,925	62,557	4,652	1,415	6,067	145	1,415	101	236
Lehigh Valley Coal Co.,	4	.....	4	4	1	5	125,245	125,245	674	274	948	168	.....	168	274
Hudson Coal Co.,	3	2	5	11	2	13	161,085	44,096	1,185	350	1,535	395	175	107	175
Hillside Coal and Iron Co.,	4	.....	4	3	.....	3	114,120	152,159	656	255	911	164	.....	219	.....
Traders Coal Co.,	.....	.....	.....	1	.....	1	.....	78,290	205	61	266	.....	.....	205	.....
Reliance Coal Co.,	2	.....	2	.....	.....	.....	13,234	.....	54	41	95	18	.....	.....	.....
Miscellaneous Companies,	.....	.....	.....	.....	.....	.....	.....	.....	227	95	322	.....	.....	.....	.....
Totals and averages for district	**46**	**3**	**49**	**65**	**9**	**74**	98,208	69,501	7,653	2,491	10,144	166	830	117	276

TABLE C.—Classification of Fatal Accidents Inside and Outside of Mines

	Months													
	January	February	March	April	May	June	July	August	September	October	November	December	Totals	Percentages
Causes of Accidents Inside														
Falls of coal,	1	....	4	....	3	1	....	....	1	....	1	1	12	26.09
Falls of roof,	2	2	1	....	1	1	....	2	....	1	1	2	13	28.26
Mine cars,	....	....	1	....	....	2	....	....	....	1	....	....	4	8.69
Explosions of gas,	....	....	6	....	1	....	....	....	....	....	1	....	8	17.39
Suffocation by gas, etc.,	....	....	2	....	....	....	....	....	....	....	....	....	2	4.35
Explosions of powder and dynamite,	....	....	....	....	....	....	....	....	....	....	1	....	1	2.18
Blasts, premature and otherwise,	....	....	....	1	....	....	1	....	....	2	1	....	5	10.86
Falling into shafts,	....	....	....	1	....	....	....	....	....	....	....	....	1	2.18
Totals,	3	2	14	2	5	4	1	2	1	4	5	3	46	100.00
Causes of Accidents Outside														
Cars,	....	....	....	....	....	....	....	1	....	....	....	....	1	33.33
Machinery,	....	....	....	....	....	....	....	....	1	....	....	....	1	33.33
Miscellaneous,	....	....	....	....	1	....	....	....	....	....	....	....	1	33.34
Totals,	....	....	....	....	1	....	....	1	1	....	....	....	3	100.00
Grand totals inside and outside,	3	2	14	2	6	4	1	3	2	4	5	3	49	------

TABLE D.—Classification of Non-Fatal Accidents Inside and Outside of Mines

	Months													
	January	February	March	April	May	June	July	August	September	October	November	December	Totals	Percentages
Causes of Accidents Inside														
Falls of coal,	2	....	1	2	1	....	1	....	....	1	....	....	8	12.30
Falls of roof,	1	2	1	1	4	2	1	1	1	2	2	....	18	27.69
Mine cars,	1	....	3	....	2	1	....	....	1	....	1	4	13	20.00
Explosions of gas,	1	1	6	....	1	3	....	4	....	....	....	....	16	24.61
Explosions of powder and dynamite,	....	....	....	....	....	....	....	1	....	....	1	....	2	3.08
Blasts, premature and otherwise,	....	1	....	....	....	....	1	....	....	1	....	1	4	6.16
Mules,	....	1	....	....	....	....	....	....	....	....	....	....	1	1.54
Miscellaneous,	....	....	....	1	....	....	....	....	....	1	1	....	3	4.62
Totals,	5	5	11	4	8	6	3	6	2	5	5	5	65	100.00
Causes of Accidents Outside														
Machinery,	1	....	....	....	1	....	....	....	2	....	....	....	4	44.44
Miscellaneous,	....	....	1	....	....	....	....	1	1	....	1	1	5	55.56
Totals,	1	....	1	....	1	....	....	1	3	....	1	1	9	100.00
Grand totals inside and outside,	6	5	12	4	9	6	3	7	5	5	6	6	74	------

TABLE E.—Occupations of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Inside													
Miners,	3	1	4	2	3	1	1	1	1	3	4	....	24
Miners' laborers,	....	....	6	....	1	2	....	1	....	....	1	3	14
Drivers and runners,	....	....	2	....	....	1	....	....	....	....	....	....	3
Doorboys and helpers,	....	....	....	....	....	....	....	....	....	1	....	....	1
Company men,	....	1	2	....	1	....	....	....	....	....	....	....	4
Totals,	3	2	14	2	5	4	1	2	1	4	5	3	46
Outside													
Engineers and firemen,	....	....	....	....	....	....	....	....	1	....	....	....	1
Headmen,	....	....	....	....	1	....	....	....	....	....	....	....	1
Laborers,	....	....	....	....	....	....	....	1	....	....	....	....	1
Totals,	....	....	....	....	1	....	....	1	1	....	....	....	3
Grand totals inside and outside,	3	2	14	2	6	4	1	3	2	4	5	3	49

TABLE F.—Occupations of Persons Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Inside													
Assistant mine foremen,	....	....	....	....	....	....	....	1	....	....	....	....	1
Miners,	3	3	1	2	3	3	2	2	1	3	3	2	23
Miners' laborers,	1	....	2	2	2	2	1	3	1	2	1	....	17
Drivers and runners,	1	1	4	....	2	....	....	....	....	....	1	1	10
Doorboys and helpers,	....	....	2	....	....	....	....	....	....	....	....	....	2
Company men,	....	1	2	....	1	1	....	....	....	....	....	1	6
Engineers,	....	....	....	....	....	....	....	....	....	....	....	1	1
Totals,	5	5	11	4	8	6	3	6	2	5	5	5	65
Outside													
Blacksmiths and carpenters,	....	....	....	....	....	....	....	....	....	....	1	....	1
Slatepickers (boys),	1	....	....	....	....	....	....	....	1	....	....	....	2
Motor tenders,	....	....	....	....	....	....	....	....	1	....	....	....	1
Chute tenders,	....	....	1	....	....	....	....	....	....	....	....	....	1
Oilers,	....	....	....	....	1	....	....	....	....	....	....	....	1
Company men,	....	....	....	....	....	....	....	1	1	....	....	1	3
Totals,	1	....	1	....	1	....	....	1	3	....	1	1	9
Grand totals inside and outside	6	5	12	4	9	6	3	7	5	5	6	6	74

TABLE G.—Nationality of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
American,			5	1	3	1				1	1		12
English,						1		1					2
Irish,					1			1					2
German,		1		1									2
Polish,	1		4		1	1	1	1	1	1	3	1	15
Italian,	1		3			1				1	1	1	8
Slavonian,					1								1
Lithuanian,		1										1	2
Austrian,			1							1			2
Russian,	1		1						1				3
Totals,	3	2	14	2	6	4	1	3	2	4	5	3	49

TABLE H.—Nationality of Persons Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
American,	2	2	5	2	2				2		2	3	20
English,											1		1
Scotch,								1			1		2
Irish,	1				2	1						3	7
Polish,	3	2	1	1	4	5	1	1		2			20
Hungarian,									1				1
Italian,			4	1	1		1			3	2		12
Slavonian,							1	3					4
Lithuanian,								1	1				2
Austrian,		1											1
Russian,			2					1	1				4
Totals,	6	5	12	4	9	6	3	7	5	5	6	6	74

TABLE I.—Operators and mines, kind of openings, type and size of fans, size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents and number of persons employed inside

Names of Operators and Mines	Kind of opening	Gaseous or non-gaseous	Method of ventilation	Diameter of fan in feet and inches	Width of blades in feet and inches	Depth of blades in feet and inches	Number of revolutions per minute	Water gauge developed—in inches	Name of fan	Power used	Number of splits of air currents	Number of cubic feet of air per minute entering the mine at inlet	Total quantity of air per minute circulating in all the splits in cubic feet	Number of cubic feet per minute passing out at outlet	Number of persons employed inside
Pennsylvania Coal Co.															
Barnum Colliery															
Barnum No. 2,	Shaft,	Gaseous,	2 Fans,	17	5.1	4.6	58	1	Guibal,	Steam,	6	158,800	145,300	162,900	312
Barnum No. 3,	Shaft,			20	6.5	5.3	60	1			2	42,600	48,400	43,600	58
Number 9 Colliery:			Fan,	17	5	5	67	.3							
Number 1,	Shaft,														
Number 8,	Shaft,	Gaseous,	Fan,	20	6.6	5.3	52	.8	Guibal,	Steam,	4	92,385	77,110	100,150	201
Number 9,	Shaft,		Fan,	20	6	5.3	50	1.			6	76,700	53,500	80,400	209
Number 10 or Leadville,	Shaft,		Fan,	20	6.5	5.3	64	1.5			5	97,365	79,630	103,000	308
Number 6 Colliery:			Fan,	20	6.5	5.3	65	1.5			6	106,200	93,200	110,000	414
Number 5,	Shaft,														
Number 6,	Shaft,	Gaseous,	Fan,	20	6.5	5.3	58	1.	Guibal,	Steam,	7	111,665	90,608	112,993	375
Number 11,	Shaft,		Fan,	20	6.5	5.3	68	1.			5	67,300	58,990	81,340	263
Ewen Colliery:			Fan,	20	6.5	5.3	65	1.			9	83,800	68,000	86,700	291
Hoyt,	Shaft,														
Number 7,	Shaft,	Gaseous,	Fan,	20	6.5	5.3	76	1.2	Guibal,	Steam,	8	145,000	135,000	150,000	306
Number 4,	Shaft,		Fan,	20	6.5	5.3	60	.9			5	83,600	68,300	89,000	241
Number 14 Colliery:			Fan,	20	6.5	5.3	60	1.5			7	98,260	86,105	110,985	300
Number 14,	Shaft,														
Number 14,	Slope,	Gaseous,	3 Fans,	20	6.5	5.3	70	1.8	Guibal,	Steam,	11	178,000	144,000	182,000	659
Number 14,	Tunnel,		Fan,	20	6	5	70	.8			4	44,300	37,400	48,300	145
Cortright,	Slope,		Fan,	17	5	4	70	.8			2	32,200	27,100	35,100	230
			Fan,	20	6.5	5.3	50	.7			4	68,720	63,200	75,620	182

Lehigh Valley Coal Co.															
Mineral Spring Colliery:															
Mineral Spring,	Shaft,	Gaseous,	Fan,	20	6.6	5.	50	1.	Guibal,	Steam,	2	52,000	24,500	60,500	161
Mineral Spring,	Slope,	Gaseous,	Fan,	12	4.2	3.5	100	.75			1	29,000	20,000	30,000	57
Mineral Spring,	Drift,	Non-gas.	Fan,	12	4	3.6	100	.5			2	10,500	6,000	11,000	28
Coal Brook,	Slope,	Non-gas.	Fan,	20	6	5.5	45	.7			2	39,400	28,000	43,500	127
Coal Brook,	Tunnel,	Non-gas.,	Fan,§								1	23,000	16,000	25,200	68
Heidelburg No. 1 Colliery:															
Heidelburg No. 1,	Slope,	Non-gas.	Fan,	16	5.4	4	80	.6	Guibal,	Steam,	2	54,873	48,000	55,995	105
Heidelburg Marcy,	Slope,	Non-gas.	Fan,	10	4	3	80	.6			2	44,400	39,430	55,758	123
Heidelburg,	Shaft,	Non-gas.	Fan,	20	6	5.1	80	.6			1	23,500	12,300	25,500	53
Heidelburg,	Tunnel,	Non-gas.,	Fan,	†							2	32,700	20,900	33,000	73
Hudson Coal Co.															
Laflin Colliery:															
Laflin,	Shaft,	Non-gas.	Fan,	20	5	5	76	.8	Guibal,	Steam,	6	190,580	150,200	195,610	255
Laflin,	Tunnel,	Non-gas.	Fan,	14	4	3.6	86	.8			2	68,310	46,815	75,305	165
Pine Ridge Colliery:															
Pine Ridge,	Shaft,	Gaseous,	2 Fans,	28	6.6	7.6	58	2.2	Guibal,	Steam,	10	290,200	91,000	‡170,800	524
Laurel Run,	Slope,	Gaseous,	2 Fans,	28	6.6	7.6	56	2.3			6	133,980	99,120	148,370	226
Hillside Coal and Iron Co.															
Butler Colliery:															
Butler Marcy,	Slope,	Non-gas.	Fan,	20	6	5	80	1.6	Guibal,	Steam,	4	49,700	35,400	55,400	100
Butler Checker,	Slope,		Fan,	10	3.6	3	110	.6	Guibal,	Electricity,	2	47,000	30,000	49,700	110
Thomas,	Shaft,		2 Fans,	15	3.6	4.6	100	1.2	Guibal,	Electricity,	8	240,800	199,000	250,000	450
				16	5	4	80	1.2	Guibal,	Steam,					
*Fernwood No. 1,	Slope,		Fan,	15	5	4									
*Fernwood No. 5,	Slope,		Fan,	14	4	3.6									
Clarence Colliery:															
*Clarence No. 1,	Slope,	Non-gas.	Fan,	12	3.4	4									
*Clarence No. 2,	Slope,		Natural,												
Delaware and Hudson Co.															
Delaware Colliery:															
Delaware,	Shaft,	Gaseous,	2 Fans,	22.5	6.6	5.6	70	1.4	Guibal,	Steam,	8	128,900	90,870	138,410	227
Traders Coal Co.															
Ridgewood Colliery:															
Ridgewood,	Slope,	Non-gas.	Fan,	16	5.2	4	68	.9	Guibal,	Steam,	4	47,417	43,922	52,533	200
xRidgewood,	Tunnel,	Non-gas.													
Reliance Coal Co.															
Reliance Colliery:															
Reliance,	Shaft,	Non-gas.	Fan,	18	4.6	4.6	60	.2	Guibal,	Steam,	2	25,720	24,325	37,650	54

†Ventilated by fan at Heidelburg Shaft.
‡22,400 cubic feet, the intake ventilates the old workings of Bennett Shaft and cannot be measured on the return.
§Ventilated by fan at Coal Brook Slope. *Idle. xAbandoned.

TABLE 1.—Operators, location of collieries, railroads, etc.

Names of Operators and Collieries	County	Name of General Superintendent	Post Office	Name of Superintendent	Post Office	Railroad to Mine
Pennsylvania Coal Co.						
Barnum,	Luzerne,	W. A. May, General Mgr., W. W. Inglis,	Dunmore,	Henry T. MacMillan,	Pittston,	Erie
Number 9,				Henry T. MacMillan,	Pittston,	
Number 6,				William P. Jennings,	Pittston,	
Ewen,				William P. Jennings,	Pittston,	
Number 14,				John W. Reid,	Plainsville,	
Ewen Washery,				William P. Jennings,	Pittston,	
Number 6 Washery,				William P. Jennings,	Pittston,	
Number 9 Washery,				Henry T. MacMillan,	Pittston,	
Lehigh Valley Coal Co.						
Mineral Spring,	Luzerne,	S. D. Warriner, General Manager,	Wilkes-Barre,	Thomas Thomas,	Wilkes-Barre,	Lehigh Valley
Heidelburg No. 1,	Luzerne,			W. D. Owens,	Pittston,	
Hudson Coal Co.						
Laflin,	Luzerne,	C. C. Rose, General Manager,	Scranton,	E. R. Pettebone,	Dorranceton,	Delaware and Hudson
Pine Ridge,	Luzerne,					
Hillside Coal and Iron Co.						
Butler,	Luzerne,	W. A. May, General Manager, W. W. Inglis,	Dunmore,	William P. Jennings,	Pittston,	Erie
Delaware and Hudson Co.						
Delaware,	Luzerne,	C. C. Rose, General Manager,	Scranton,	E. R. Pettebone,	Dorranceton,	Delaware and Hudson
Traders Coal Co.						
Ridgewood,	Luzerne,	W. L. Schlager,	Scranton,	Thomas W. Parry,	Avoca,	C. R. R. of N. J. and N. Y. S. and W.
Reliance Coal Co.,						
Reliance,	Luzerne,	M. J. Healey,	Plains,	A. J. Duffey,	Plains,	Lehigh Valley

TABLE 2.—Number of tons of coal mined, number of days worked, number of persons employed, number killed and injured, quantity of powder, dynamite and so-called safety explosives used, etc.

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Explosives: Number of pounds of powder used	Explosives: Number of pounds of dynamite used	Number of horses and mules
Pennsylvania Coal Co.												
Barnum,	Luzerne,	364,260	17,284	2,500	384,044	229	725	3	3	345,175	5,494	69
Number 9,		579,240	81,749	5,869	666,858	227	1,520	6	13	571,275	9,624	134
Number 6,		398,221	31,245	7,730	437,196	236	1,064	7	10	480,875	29,340	117
Ewen,		473,687	52,773	----------	526,460	241	1,223	3	2	508,325	22,434	116
Number 14,		676,543	29,243	1,994	707,780	240	1,499	14	24	617,075	65,496	157
		2,491,951	212,294	18,093	2,722,338	------	6,031	33	52	2,522,725	132,388	593
Washeries												
Ewen,	Luzerne,	55,518	3,491	----------	59,009	119	11	*	----	----------	----------	------
Number 6,		27,673	1,973	----------	29,646	68	----------	†	----	----------	----------	------
Number 9,		59,690	6,941	----------	66,631	112	25	‡	----	----------	----------	------
		142,881	12,405	----------	155,286	------	36	----	----	----------	----------	------
Totals,		2,634,832	224,699	18,093	2,877,624	------	6,067	33	52	2,522,725	132,388	593
Lehigh Valley Coal Co.,												
Mineral Spring,	Luzerne,	244,875	27,818	4,281	276,974	166	504	3	5	175,275	81,885	79
Heidelburg No. 1,		197,338	25,004	1,666	224,008	197	444	1	----	172,250	34,285	85
Totals,		442,213	52,822	5,947	500,982	------	948	4	5	347,525	116,170	164

*These men are employed in the Ewen breaker.
†These men are employed in the No. 6 breaker.
‡These men are employed in the No. 9 breaker.

TABLE 2—Continued

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Explosives: Number of pounds of powder used	Explosives: Number of pounds of dynamite used	Number of horses and mules
Hudson Coal Co.												
Laflin,	Luzerne,	109,905	18,949	714	129,568	126	539	2	4	213,925	33,012	58
Pine Ridge,		310,396	40,932	4,159	355,487	183	996	3	9	498,875	12,784	86
Totals,		420,301	59,881	4,873	485,055	.....	1,535	5	13	712,800	45,796	144
Hillside Coal and Iron Co.												
Butler,	Luzerne,	424,233	27,543	4,703	456,479	247	911	4	3	453,875	65,062	82
Delaware and Hudson Co.												
Delaware,	Luzerne,	63,614	12,906	2,935	79,455	113	322	....	....	82,200	2,157	57
Traders Coal Co.												
Ridgewood,	Luzerne,	70,215	5,730	2,345	78,290	191	266	....	1	131,250	6,800	29
Reliance Coal Co.												
Reliance,	Luzerne,	28,013	9,125	2,564	39,702	289	95	3	....	85,500	1,200	15
Grand totals,		4,083,421	392,706	41,460	4,517,587	.....	10,144	49	74	4,335,875	369,573	1,094

TABLE 2.—**Part 2.**

Names of Operators	County	Number of Boilers					Locomotives			Number of steam engines of all classes	Total horse power	Number of pumps delivering water to surface	Capacity in gallons per minute	Quantity delivered to surface per minute—gallons	Number of electric dynamos	Number of air compressors
		Cylindrical	Horse power	Tubular	Horse power	Total horse power	Steam	Air	Electric							
Pennsylvania Coal Co.,	Luzerne,	----	----	76	14,497	14,497	13	11	21	193	12,124	16	21,948	10,784	5	16
Lehigh Valley Coal Co.		----	----	20	3,250	3,250	3	----	----	52	3,810	12	7,812	6,352	----	----
Hudson Coal Co.,		----	----	23	4,915	4,915	1	----	4	118	5,247	6	8,200	4,300	1	5
Hillside Coal and Iron Co.,		----	----	31	3,150	3,150	6	----	16	48	3,125	6	2,400	1,350	6	----
Delaware and Hudson Co.,		15	405	5	625	1,030	----	----	----	52	2,276	3	5,200	1,900	----	2
Traders Coal Co.,		6	120	2	225	345	----	----	----	7	380	2	600	400	----	----
Reliance Coal Co.,		----	----	3	450	450	----	----	----	3	450	2	480	240	----	----
Totals,		21	525	160	27,112	27,637	23	11	41	473	27,412	47	46,640	25,326	12	23

TABLE 3.—Number of each class of employes inside and outside of mines

Names of Operators	County	Inside											Outside									Grand total inside and outside
		Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Doorboys and helpers	Pumpmen	Company men	All other employes	Total inside	Superintendents	Foremen	Blacksmiths and carpenters	Engineers and firemen	Slate pickers (boys)	Slate pickers (men)	Bookkeepers and clerks	All other employes	Total outside	
Pennsylvania Coal Co.,	Luzerne,	16	37	16	1,572	1,399	672	141	20	420	359	4,652	3	5	100	118	337	131	17	704	1,415	6,067
Lehigh Valley Coal Co.,		4	8	----	295	111	118	15	12	52	59	674	----	2	23	41	19	20	7	102	274	948
Hudson Coal Co.,		2	4	10	471	406	139	15	10	115	13	1,185	----	2	15	55	62	52	5	159	350	1,535
Hillside Coal and Iron Co.,		3	2	1	242	157	31	7	9	132	72	656	1	1	16	20	59	27	5	126	255	911
Delaware and Hudson Co.,		1	1	3	51	93	30	9	3	34	2	227	----	1	5	21	18	6	2	42	95	322
Traders Coal Co.,		1	2	----	102	51	29	6	2	8	4	205	----	1	4	9	16	7	2	22	61	266
Reliance Coal Co.,		1	----	1	19	19	10	------	2	2	------	54	----	1	3	6	20	------	1	10	41	95
Totals,		28	54	31	2,752	2,236	1,029	193	58	763	509	7,653	4	13	166	270	531	243	39	1,225	2,491	10,144

TABLE 3.—Part 2

Names of Operators	County	Average Number of Days Worked in Breaker												
		January	February	March	April	May	June	July	August	September	October	November	December	Total
Pennsylvania Coal Co.,	Luzerne,	16	20	23	20	21	19	13	14	20	22	23	24	235
Lehigh Valley Coal Co.,		17	12	18	16	17	13	9	15	11	16	18	20	182
Hudson Coal Co.,		15	13	14	14	15	14	9	14	15	9	10	13	155
Hillside Coal and Iron Co.,		19	21	25	20	21	19	13	15	22	23	24	25	247
Delaware and Hudson Co.,		12	10	10	13	13	12	7	6	3	2	12	13	113
Traders Coal Co.,		17	14	19	------	15	12	13	18	20	20	21	22	191
Reliance Coal Co.,		24	24	27	25	25	26	23	22	21	24	23	25	289

TABLE 4.—Fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Colliery	County	Nature and Cause of Accident in Brief
Jan. 14	Anthony Booker,	Polish,	Miner,	42	S.			Number 6,		Killed by fall of rock while drilling a hole at the face of his breast.
21	Michael Kilusky,	Russian,	Miner,	35	S.			Butler,		Fatally injured by fall of rider coal at the face of his breast.
28	Fredrick Furrett,	Italian,	Miner,	32	M.	1	1	Heidelburg No. 1,		Killed by fall of rock at face of breast. He was drilling a hole in a piece of rock to take it down when it fell on him.
Feb. 4	Michael Rugum,	Lithuanian,	Miner,	30	M.	1	2	Number 14,		Killed by fall of rock while robbing pillars. A blast knocked out a prop, and while he was resetting it the roof fell.
18	Alois Sterr,	German,	Co. Laborer,	29	M.	1	3	Number 9,		Killed by fall of rock in tunnel on gangway road. He fired a blast, which failed to cut all the rock, and while preparing to drill another hole a large piece of rock fell on him.
March 2	Victor Scuzka,	Polish,	Laborer,	26	S.			Number 14,	Luzerne,	Suffocated by after-damp at foot of breast gangway road caused by an explosion of gas.
	Jacob Scuzrick,	Austrian,	Miner,	24	S.			Number 14,		Suffocated by after-damp in abandoned breast, caused by an explosion of gas.
	Charles Richardson,	American,	Miner,	39	M.	1	5	Number 14,		Fatally burned by an explosion of gas at foot of slope. Died next day.
	Thomas Fleming,	American,	Runner,	23	S.			Number 14,		Fatally burned by an explosion of gas at foot of slope. Died next day.
	John Ruscavage,	Polish,	Bratticeman,	29	S.			Number 14,		Fatally burned by an explosion of gas at foot of slope. Died March 4.
	Bernard Coyle,	American,	Co. Laborer,	40	M.	1	2	Number 14,		Fatally burned by an explosion of gas at foot of slope. Died March 5.
	Erico Copiteia,	Italian,	Laborer,	29	S.			Number 14,		Fatally burned by an explosion of gas at foot of slope. Died March 12.
	Anthony Tardo,	American,	Driver,	16	S.			Number 14,		Fatally burned by an explosion of gas at foot of slope. Died April 2.

March	3	Frank Douskie,	Polish,	Miner,	27	M.	1		Number 6,		Fatally injured by fall of coal at face of breast while drilling a hole in the bottom bench. Died next day.
	17	Anthony Donsky,	Polish,	Laborer,	26	S.			Butler,		Fatally injured by fall of roof. While shoveling back coal from face of breast a large slab of roof rock fell on him. Died next day.
	26	Peter Dergidant,	Italian,	Laborer,	33	M.	1	2	Ewen,		Fatally injured by fall of roof rock while helping his miner drill a hole at face of breast. Died same day.
	27	Hugh Richards,	American,	Laborer,	53	M.	1	3	Number 9,		Fatally injured by fall of coal. While loading a car at face of breast a large piece of coal fell off the rib. Died March 29.
		Joseph Montione,	Italian,	Miner,	36	M.	1	2	Number 6,		Fatally injured by being run over by a trip of loaded cars on gangway road. He came down from his breast to the gangway road and seeing the door open he closed it. When he heard the cars coming, he ran back to open the door and reached it just as the cars struck the door, and he was knocked down.
		Joseph Chanoski,	Russian,	Laborer,	22	S.			Number 6,	Luzerne,	Killed by fall of rider coal while loading a car. His miner was robbing pillars and called to Chanoski to get back out of danger. Chanoski failed to take his shovel with him and started back for it, and was caught under the fall.
April	27	Gus Detireck,	German,	Miner,	52	S.			Reliance,		Fatally injured by a blast. He tamped a hole in the face of his breast and retreated to a place of safety. He thought it had missed fire and went back to the face when the shot exploded.
		John Quinn,	American,	Co. Miner,	55	S.			Barnum,		Killed by falling down No. 3 Barnum shaft. He was acting as footman. He passed around the shaft to put the nipper on the carriage that was down, and in some manner fell down the shaft. The gate was shut on the open side of shaft.
May	3	John Novitsky,	Polish,	Miner,	27	S.			Reliance,		Killed by fall of top coal at face of breast. He was mining out some loose coal after firing a blast.
	7	John Pechill,	Slavonian,	Laborer,	43	M.	1	3	Number 14,		Killed by fall of rock at face of breast. His miner discovered the roof was bad and they were preparing to set a prop when the rock fell on Pechill.

TABLE 4—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Colliery	County	Nature and Cause of Accident in Brief
May 7	William Derrig,	American,	Co. Laborer,	26	S.			Number 6,		Burned by gas. He was unloading rock in the old workings, Pittston vein. He left his place and wandered through the abandoned workings looking for a chain with which to tie the mule, and came in contact with a small quantity of gas, which he ignited. Died May 14.
20	William Murphy,	American,	Miner,	27	S.			Barnum,		Fatally injured by fall of rider coal at face of breast while robbing pillars. He was moving some coal out of the way to stand props under the rider coal when a large piece of it fell on him. Died May 22.
21	Samuel Vetrick,	American,	Headman,	19	S.			Laflin,	Luzerne,	Killed by chute falling on him. He was employed tearing out an old slush chute that was in a rock pocket in the breaker. After the breaker had stopped working he cut out a timber under the chute, which caused the chute above to fall on him. Outside.
25	John Kelley,	Irish,	Miner,	55	M.	1	1	Ewen,		Killed by fall of rider coal at face of breast. He fired a blast and was mining out the loose coal when the rider coal over his head fell on him.
June 1	Richard White,	English,	Miner,	40	M.	1	5	Number 14,		Killed by fall of top rock on gangway road while driving a cross-cut.
11	Joseph Cole,	Italian,	Laborer,	20	S.			Butler,		Killed by coal falling from pillar at face of breast while loading a car.

June	15	Michael Balonis,	Polish,	Laborer,	52	M.	1		Number 9,		Fatally injured by mine car while going out the gangway. He was walking along a passing branch and seeing the electric motor coming slowly with a car of timber he stepped from the track and his head struck the overhead wire, causing him to fall in front of the car.
	24	Edward Kennedy,	American,	Runner,	19	S.			Mineral Spring,		Killed by mine car. The driver took a car up into a miner's breast and hitched his mules on the rope to pull the car up to the end of the track. When Kennedy came up he took the whip from the driver and struck the mules. The mules jerked, which broke the pin in the pulley wheel, and the car ran back on the drag and was thrown off the track onto the runner.
July	28	Paul Nowack,	Polish,	Miner,	38	M.	1	1	Laflin,		Fatally injured by a blast. He had prepared a blast in his breast and lighted the match and waited for it to go off. He returned to the face to investigate and when close to the hole it exploded.
Aug.	9	John McDonough,	Irish,	Miner,	30	M.	1		Mineral Spring,	Luzerne,	Killed by fall of rock at face of breast. He had fired a blast in the bottom bench of coal, which failed to cut, and while working out the loose coal the middle rock fell on him.
	25	John Allen,	English,	Co. Laborer,	74	M.	1		Pine Ridge,		Killed by cars. While he was throwing some refuge on a car of rock, a car came from the head of shaft and knocked him between the car bumpers. Outside.
	31	Michael Bugarea,	Polish,	Laborer,	26	S.			Number 6,		Killed by fall of roof rock at face of breast while loading a car of coal.
Sept.	7	Joseph Meskoskie,	Russian,	Miner,	24	S.			Number 14,		Killed by fall of rider coal at face of breast while barring out some loose coal after firing a blast.
	30	Stanley Smith,	Polish,	Engineer,	20	S.			Number 14,		Killed by being caught in fly wheel of engine. He was running the culm conveyor engine, which was on the center that morning. He sent for the bankman to help him get it off. Smith put steam on, then got astraddle of one of the arms of the fly wheel, when instantly the engine started, the wheel dashing him against the floor of the engine house. Outside.

TABLE 4—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Colliery	County	Nature and Cause of Accident in Brief
Oct. 22	Keamey Zakenc,	Polish,	Miner,	43	M.	1	2	Pine Ridge,		Killed by a blast. He fired a blast and when he went back to see if it had missed, the blast exploded when he was within a few feet of the face.
23	George Posatto,	Austrian,	Rock miner,	25	S.			Number 9,		Killed in No. 10 shaft by fall of rock in face of tunnel. The overhead rock in the tunnel was considered dangerous and the mine boss ordered that it be timbered. While Posatto was cutting a hitch in the side of the tunnel for the collar, a large slab of rock fell on him.
	William Patonis,	American,	Doorboy,	17	S.			Number 9,	Luzerne,	Killed by coal falling off loaded car on gangway road and striking him on the head. He came down from his door to the passing branch, where a trip of loaded cars was off the track, and after the motor had pulled the cars on track, the body of the boy was discovered next to the rib side of the track.
30	Thomas Tiberie,	Italian,	Miner,	27	S.			Number 14,		Fatally injured by a blast he was firing while starting breast on gangway. Died next day.
Nov. 17	Barney Mazetus,	Polish,	Laborer,	34	M.	1	1	Reliance,		Burned by gas. He went up into a breast that was idle on account of gas being found in it and went beyond the danger signal and ignited the gas. Died November 21.

Nov.	17	Anthony Lubotka, --	Polish, ----	Miner, -------	26	M.	1	--	Mineral Spring, --		Killed while firing a blast. He put a few rounds of tamping next to the powder, left his drill in the hole for tamping, cut his match and ignited it, when the blast went off, driving the drill through his body.
	19	Tony Tunoff, ----------	Italian, ----	Miner, -------	42	M.	1	3	Butler, ----------		Killed by fall of rider coal while robbing pillars. He and the laborer had secured the roof by props and timber.
	20	William Richardson, -	American,--	Miner, -------	36	M.	1	2	Number 9, --------		Killed by fall of roof rock at face of breast while drilling a hole.
	22	John Veshoskie, ------	Polish, ----	Miner, -------	23	S.	----	----	Pine Ridge, ------		Fatally burned by powder. While making up a charge of powder with his lamp on his head, a spark from the lamp fell into the keg. Died November 24.
Dec.	11	William Lobensky, --	Lithuanian,	Laborer, ------	35	M.	1	3	Number 6. -------	Luzerne, ------	Killed by fall of rock on gangway road. While going in to work he came to a station where a steam radiator was used to dry sand for the motor. He sat down close to the upper rib to warm himself, when a large piece of rock fell on him.
	13	John Mahalskie, ------	Polish, ----	Laborer, ------	52	M.	1	----	Barnum, ----------		Killed by fall of top coal while drawing out pillars. The miner left a stump of pillar to hold up the top coal and also stood props to support it, but it broke over the props and fell on the laborer.
	15	Charles Schandres, --	Italian, ----	Laborer, ------	19	S.	----	----	Ewen, ----------		Fatally injured by fall of rock at face of breast. He was loading a car when a large piece of rock fell and crushed him against the car.

TABLE 5.—Non-fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Colliery	County	Nature and Cause of Accident in Brief
Jan. 16	Kasmeit Poutiar,	Polish,	Laborer,	22	S.	Number 14,	Luzerne,	Leg broken while barring out coal at face of breast.
20	Hugh Burke,	American,	Driver,	17	S.	Mineral Spring,		Foot bruised by car. He stepped on plane rope at head of plane while hoisting.
22	Clarence Carlchner,	American,	Slatepicker,	17	S.	Number 9,		Arm broken while oiling machinery in breaker. Outside.
25	Laurence Teletsky,	Polish,	Miner,	42	M.	Number 14,		Face and hands burned by gas at face of breast.
	Charles Henoyaskie,	Polish,	Miner,	49	M.	Number 14,		Leg broken. While barring out coal at face of breast the coal fell on him.
29	Thomas Hopkins,	Irish,	Miner,	48	M.	Pine Ridge,		Collar bone broken by fall of rock at face of breast.
Feb. 11	Julian Romski,	Polish,	Miner,	37	M.	Mineral Spring,		Back painfully bruised by fall of rock at face of breast.
15	Thomas Mangan,	American,	Runner,	22	S.	Number 14,		Kicked by a vicious mule on gangway road.
18	Larry Pirnot,	Austrian,	Co. Miner,	36	M.	Number 9,		Toes crushed by fall of rock on gangway road. The same fall killed Alois Sterr.
20	Peter Dixon,	Polish,	Miner,	35	S.	Number 14,		Leg and arm cut by a premature blast at face of breast.
27	John Ward,	American,	Headman,	34	M	Pine Ridge,		Face and hands burned by gas while going through old workings.
March 2	Julio Akirani,	Italian,	Laborer,	24	S.	Number 14,		Face and hands burned by an explosion of gas in the Pittston vein, in Branagans slope. Eight other workmen lost their lives by the same explosion.
	Charles Tumello,	Italian,	Driver,	16	S.			
	Joseph Howley,	American,	Driver,	20	S.			
	Michael Burke,	American,	Driver,	18	S.			
	Andrew Voxmonskie,	American,	Doorboy,	16	S.			
	Joseph Captian,	Italian,	Doorboy,	18	S.			
12	Peter Beckel,	Italian,	Driver,	17	S.	Butler,		Leg broken by mine car jumping track on gangway road.
	Jacob Hopeck,	Polish,	Miner,	31	M.	Number 14,		Bruised on back by fall of rock at face of breast.

March	15	Ervin Schmaltz,	American,	Chute-tender,	18	S.	Number 9,		Arm broken falling off breaker steps. Outside.
	25	Joseph Millar,	Russian,	Co. Laborer,	25	M.	Barnum,		Leg broken by mine car jumping the track on him on gangway road.
	27	John Kirbin,	Russian,	Laborer,	26	M.	Number 6,		Arm broken by fall of coal while robbing pillars.
	29	William Thompson,	American,	Shaft footman,	23	S.	Ewen,		Hand crushed by car wheel while blocking it at foot of shaft.
April	3	John Horan,	American,	Miner,	30	M.	Number 9,		Shoulder and hips bruised by fall of top coal at face of breast.
	8	Conrad Moss,	American,	Laborer,	25	M.	Number 9,		Head bruised by a prop falling and striking him on the head at face of breast.
	9	Liali Picetelli,	Italian,	Miner,	35	S.	Number 14,		Jaw fractured by fall of top coal in his breast.
	24	Frank Garick,	Polish,	Laborer,	27	M.	Number 6,		Foot cut and bruised by roof rock falling on him at face of breast.
May	3	Michael Smith,	Polish,	Laborer,	30	M.	Number 9,		Ribs and pelvis bone broken by fall of slate and bone at face of breast.
	7	Luke White,	Polish,	Laborer,	40	M.	Number 6,		Leg broken by the above fall.
		John Mullery,	American,	Co. Laborer,	22	S.			Leg broken and face burned by an explosion of gas in old abandoned workings, Marcy vein.
	8	Joseph Voshane,	Polish,	Miner,	34	M.	Number 6,	Luzerne,	Leg broken by fall of top rock at face of breast.
		Martin Roach,	Irish,	Miner,	42	M.	Number 9,		Ankle broken by fall of rock at face of breast.
	10	Stanley Rozik,	Polish,	Driver,	19	S.	Number 14,		Hip and side squeezed by falling under trip of cars on gangway road.
	12	Peter Fenara,	Italian,	Oiler,	18	S.	Number 6,		Thumb cut off while feeling for a hot box on journal in breaker. Outside.
	26	Albert Colbeck,	American,	Driver,	17	S.	Ewen,		Leg broken by car running off track on him on gangway road.
	27	Martin Hagherty,	Irish,	Miner,	50	M.	Number 14,		Leg broken by fall of coal while barring it down at face of breast.
June	1	John Maglo,	Polish,	Miner,	29	S.	Number 14,		Burned by gas at face of breast after going back from eating their lunch.
		Peter Lumis,	Polish,	Laborer,	28	M.			
	2	Anthony Shepamkie,	Polish,	Miner,	28	M.	Pine Ridge,		Bruised about the back and legs by fall of rock at face of breast.
		Joseph Napora,	Polish,	Laborer,	28	M.			
	22	Michael Granahan,	Irish,	Miner,	55	S.	Number 9,		Face and hands severely burned by gas in pump room while taking down rock.
	30	Joseph Ziskie,	Polish,	Brakeman,	22	S.	Number 14,		Arm crushed between mine cars on gangway road, amputation was necessary.
July	10	Joseph Calevan,	Italian,	Miner,	28	M.	Number 6,		Arm broken by rider coal while barring it down at face of breast.
	17	John Peters,	Slavonian,	Laborer,	38	S.	Number 6,		Leg broken by rock falling on him from the roof at face of breast.
	22	John Yachowaskak,	Polish,	Miner,	25	M.	Number 6,		Arm broken by a blast he was firing at face of breast. He thought it had missed fire.

TABLE 5—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Colliery	County	Nature and Cause of Accident in Brief
Aug. 9	Antanis Narkunas,	Lithuanian,	Miner,	28	S.	Pine Ridge,	Luzerne,	Face and hands burned by powder while handling his box.
	Michael Trochley,	Slavonian,	Miner,	32	M.	Laflin,		Burned about the face and hands by gas. They went up to the face of breast after eating their lunch and ignited the gas.
	Toney Vavran,	Slavonian,	Laborer,	28	M.			
	Thomas Vacona,	Slavonian,	Laborer,	29	M.			
16	John Chumko,	Russian,	Company man,	37	M.	Mineral Spring,		Arm and back sprained. He stepped into a hole in the floor. Outside.
20	William Walker,	Scotch,	Asst. Foreman,	55	M.	Number 14,		Face and hands slightly burned by gas at face of gangway.
31	Frank Bitsky,	Polish,	Laborer,	27	M.	Butler,		Leg broken and hip dislocated by fall of rock at face of breast.
Sept. 7	Paul Luetinkie,	Russian,	Miner,	45	M.	Laflin,		Hips and leg bruised by rock falling on him at face of his breast.
11	John Korasky,	Hungarian,	Slatepicker,	15	S.	Pine Ridge,		Arm broken by falling off railing on which he was standing. Outside.
18	Adolphus Maldoruis,	Lithuanian,	Laborer,	25	S.	Number 9,		Collar bone broken by being caught between mine car and rib on gangway.
20	Herman Wuscarger,	American,	Motor-tender,	25	S.	Number 9,		Arm crushed in machinery while oiling it. Outside.
23	John Munley,	American,	Co. Laborer,	16	S.	Number 14,		Leg and arm broken. Caught in conveyor line to breaker. Outside.
Oct. 2	Buratto Germano,	Italian,	Miner,	46	M.	Number 14,		Leg broken by fall of rock while putting up cross timber on gangway.
	John Misuick,	Polish,	Laborer,	44	M.	Number 6,		Leg broken by rock sliding off the gob on him, close to face of breast.
5	Michael Miklouskis,	Polish,	Miner,	42	M.	Number 9,		Leg broken. A piece of coal that he was lifting into car at face of breast fell on him.
	Filippi Crichioni,	Italian,	Laborer,	40	S.	Ridgewood,		Leg broken by flying coal from a blast. His miner was firing on gangway road.

Oct.	11	Anthony Piacitelli,	Italian,	Miner,	43	M.	Butler,			Collar bone broken by fall of rider coal at face of breast.
Nov.	6	Thomas Pierson,	English,	Miner,	49	M.	Number 14,			Face and hands burned by powder while handling his box.
	19	John Weir,	Scotch,	Miner,	54	M.	Barnum,			Ribs fractured by fall of rock at face of breast.
		Joseph Smith,	American,	Driver,	17	S.	Number 14,			Leg broken by falling in front of mine car on gangway road.
	22	Thomas O'Boyle,	American,	Carpenter,	24	M.	Pine Ridge,			Foot painfully cut by an adze that he was using. Outside.
	24	Charles Bailey,	Italian,	Miner,	24	S.	Number 6,			Shoulder broken. He fell off the bottom coal at face of breast.
	27	Joseph Pacheta,	Italian,	Laborer,	34	M.	Pine Ridge,	Luzerne,		Toes cut off by rock falling on him at face of breast.
Dec.	7	Patrick McNulty,	Irish,	Miner,	48	M.	Barnum,			Skull fractured by flying coal from a blast he was firing in his breast.
	14	John Rhoads,	American,	Driver,	20	S.	Mineral Spring,			Hand crushed by car wheel while opening a latch on gangway road.
	18	Martin McDonald,	American,	Miner,	40	S.	Number 9,			Leg broken by mine cars while crossing between them on gangway.
	21	Harry Krause,	American,	Motor Engineer,	26	S.	Pine Ridge,			Leg broken by motor jumping the track on gangway.
	23	John Collins,	Irish,	Co. Laborer,	18	S.	Number 14,			Ribs and arm broken by falling from one floor to the other in breaker. Outside.
	28	Darby O'Boyle,	Irish,	Co. Laborer,	62	M.	Mineral Spring,			Leg broken by mine car while attending a door on gangway.

EXPLOSION OF GAS IN NO. 14 SHAFT, PENNSYLVANIA COAL COMPANY

March 2, Charles Richardson, American miner, Thomas Fleming, American Runner, John Ruscavage, Polish bratticeman, Bernard Coyle, American Co. laborer, Erico Copiteia, Italian laborer, and Anthony Tardo, American driver, were fatally burned by an explosion of gas in Branagans inside slope, No. 14 shaft, Pittston vein, Pennsylvania Coal Company. On the morning of the 2nd William Hughes, the fire boss, made his examination of the workings, and discovered a foot of gas in breast No. 299. This breast is the outside one adjoining the slope extension up the anticlinal, and is driven some distance up from the last cross-cut. All the other places being found free from gas. Hughes, after arriving at the foot of shaft, directed his men how to work, holding the men out of breast No. 299 until the gas would be removed and the place made safe. He directed his bratticeman, John Ruscavage, and Bernard Coyle, the helper, to put up a brattice in breast No. 299 to remove the gas, saying that he would go in after he had eaten his breakfast and start the men to work. He gave Ruscavage and Coyle safety lamps to work with. Ruscavage sent his helper for brattice cloth and he went in to work. About 8.00, A. M. he arrived in breast No. 299 leaving his lunch pail and sat close to a mine car that had been taken up the breast that morning by the driver to the cross-cut and left there, as it is evident the driver stopped when he came to the danger mark placed across the track. Coyle came up the breast with the brattice cloth just as Ruscavage was climbing off the car unto the gob. He said Ruscavage had an open light on his head and a safety lamp in his hand. He said he saw the gas ignited by the open light, causing an explosion, and that a few minutes after another terrific explosion took place by which the men were burned as they rushed for the slope to get out and were caught at the foot of the slope . The workings in this slope were well ventilated, the intake being on the right of the slope going down and ventilating a few places on the right and up the slope extension on the anticlinal and across the face of the workings on the left of the slope, returning up on the left of slope to the lift above. Had the men gone up the return those who worked on the left of the slope would have escaped injury.

Victor Scuzka and Jacob Scuzrick lost their lives by the above explosion, by being suffocated by the after damp before the rescuers could reach them, although every effort was made to do so. When they were found life was extinct. They had only been employed a few days in this part of the mine, and being in the dark sat down and were overcome by the after-damp.

CONDITION OF COLLIERIES

PENNSYLVANIA COAL COMPANY

Barnum.—Ventilation, drainage and condition as to safety, good.
Number 9.—Ventilation, drainage and condition as to safety, good.
Ewen.—Ventilation, drainage and condition as to safety, good.
Number 6.—Ventilation, drainage and condition as to safety,good.
Number 14.—Ventilation, drainage and condition as to safety, good.

LEHIGH VALLEY COAL COMPANY

Mineral Spring.—Ventilation, drainage and condition as to safety, good. This colliery was badly affected at Coal Brook slope by the scarcity of water from September until the end of the year. To relieve the condition they hauled water in tanks.

Heidelburg No. 1.—Ventilation, drainage and condition as to safety, fair.

HILLSIDE COAL AND IRON COMPANY

Butler.—Ventilation, drainage and condition as to safety, good.

HUDSON COAL COMPANY

Pine Ridge.—Ventilation, drainage and condition as to safety, good.

Laflin.—Ventilation, drainage and condition as to safety, good. This colliery was badly affected by the drought and was forced to shut down from September 14 to December 4.

DELAWARE AND HUDSON COMPANY

Delaware.—Ventilation, drainage and condition as to safety, good. This colliery was affected by the scarcity of water during the latter part of the year, but was able to work a few days each month.

TRADERS COAL COMPANY

Ridgewood.—Ventilation, drainage and condition as to safety, good.

RELIANCE COAL COMPANY

Reliance.—Ventilation, drainage and condition as to safety, fair.

IMPROVEMENTS

PENNSYLVANIA COAL COMPANY

No. 9 Colliery.—Feed, lime and cement house built of brick, 109 x 20 x 14 feet. Built a brick addition to car shop, size 100 x 35 x 14 feet. A new Guibal fan 20 feet in diameter, with fan house made of brick, at No. 10 shaft.

No. 8 Shaft.—A new engine house was erected and a new hoisting engine installed to handle the coal from the Clark and Babylon veins. A Guibal fan, 20 feet in diameter, was erected to take the place of the old one.

A large brick building was erected at No. 8 shaft, size 100 x 20 x 12 feet, to be used as Mine Foreman's office and shifting shanty and oil house combined.

At the No. 9 boiler plant, an additional battery of Sterling boilers, 622 horse power, was installed.

At No. 10 shaft a new engine house was built and engine installed to handle the coal from the Pittston and Marcy veins.

At No. 10 shaft two rock tunnels, 7 x 12 feet and 300 feet long and 7 x 12 feet and 125 feet long, were completed from the Marcy to the Clark veins, on the East Level heading.

No. 6 Colliery.—A rock tunnel, 7 x 12 feet and 200 feet long, was driven from the Marcy to the Pittston vein, in the basin of the entire workings, to take care of the body of water in the Pittston vein and mine out the pillars. A new pump was erected in the Marcy vein, size 24 x 48 x 16 x 48 inches, by the Scranton Steam Pump Company, to pump the water by bore holes to the surface. A tunnel, 7 x 12 feet and 100 feet long, was driven in No. 14 shaft from the Pittston to the Marcy vein, in the Laflin basin. A saw-mill has been built at this colliery to cut the mine timber by steam power.

Ewen.—In the Hoyt shaft a rock slope, 7 x 12 feet and 200 feet long, was driven from the Pittston to the Pittston vein through the anticlinal on the west side of the river. A rock plane, 7 x 12 feet and 125 feet long, was driven from the Checker to the Checker vein, for the purpose of mining the coal, which was found to be considerably above the regular level.

At No. 4 shaft a large Jeansville pump was installed in the Pittston vein, to pump the excess water to the surface. A saw-mill was built at this colliery to cut the prop timber with a steam saw.

No. 14 Colliery.—At the Cortright slope a new brick office, emergency hospital, and shifting shanty, were erected. Connections have been made with the Marcy vein and No. 14 shaft and tunnel.

HUDSON COAL COMPANY

Pine Ridge.—No. 14 plane in the Hillman vein was driven 600 feet; No. 11 plane in the Rock vein was driven 650 feet; No. 21 slope in the Checker vein was driven 900 feet; No. 22 slope in the Rock vein was driven 350 feet from Checker to the Red Ash vein. Two 8-inch bore holes were drilled from the surface to the Hillman vein, a distance of 135 feet, for flushing purposes. Two new steam boilers of 250 horse power were erected.

LEHIGH VALLEY COAL COMPANY

Mineral Spring.—The No. 3 air shaft from the surface to the upper Baltimore vein was lined with concrete. A new building was constructed to examine the mine cars for refuse in the coal.

No. 8 slope was sunk through a rock fault, and No. 9 slope graded. The silting operations in the Red Ash were extended to the west side of the slope.

A mule stable in the Red Ash vein was extended and made ready for more mules.

At Coal Brook slope, a new plane, 7 x 14 feet and 186 feet long, was completed between the No. 29 tunnel and No. 35 tunnel levels.

HILLSIDE COAL AND IRON COMPANY

Butler.—Erected a new concrete building, 94 x 40 feet, with an annex 40 x 60 feet, fire-proof throughout, to be used as machine, car and blacksmith shop.

At Fernwood a new slope, 7 x 12 feet and 1,000 feet long, was driven on the west rise, from the surface to the bottom split of Red Ash vein, to open up the Fernwood mines to deliver the coal to the Butler breaker. A tunnel was also driven off the new slope to the middle split of Red Ash. A new plane opening was driven from the Fernwood to the Clarence mine, 7 x 12 feet and 400 feet long, the coal to be taken up the Fernwood slope, thence to the Butler breaker.

In the Thomas shaft, a tunnel, 7 x 12 feet and 38 feet long, was driven from the middle split to the bottom split of Red Ash, for developing purposes.

DELAWARE AND HUDSON COMPANY

Delaware.—The new shaft in the course of sinking was sunk 160 feet from the surface and will be continued to the Red Ash vein.

The Mill Creek air shaft was extended 105 feet to the Ross vein; No. 7 rock slope was sunk 1,100 feet to the Red Ash vein; No. 10 plane in the Ross vein was extended 900 feet; No. 8 slope Ross vein was sunk 1,100 feet towards the North basin. A return airway in the Ross vein was driven 300 feet towards Mill Creek air shaft.



SEVENTH DISTRICT

LUZERNE COUNTY

Wilkes-Barre, Pa., February 23, 1910.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor to transmit herewith my annual report as Inspector of Mines for the Seventh Anthracite District for the year ending December 31, 1909.

The report contains the statistical information required by law with a brief description of the fatal and non-fatal accidents that occurred during the year.

Respectfully submitted,

T. H. PRICE,
Inspector.

SUMMARY OF STATISTICS

Number of collieries,	14
Number of mines,	46
Number of mines in operation,	43
Number of tons of coal shipped to market,	4,533,368
Number of tons used at mines for steam and heat,	516,358
Number of tons sold to local trade and used by employes,	191,080
Number of tons produced,	5,240,806
Number of tons produced by compressed air machines,	.....
Number of tons produced by electrical machines,	.....
Number of persons employed inside of mines,	8,030
Number of persons employed outside,	2,521
Number of fatal accidents inside of mines,	36
Number of fatal accidents outside,	3
Number of non-fatal accidents inside of mines,	53
Number of non-fatal accidents outside,	14
Number of tons of coal produced per fatal accident inside,	145,578
Number of persons employed per fatal accident inside,	223
Number of persons employed per fatal accident outside,	840
Number of persons employed per non-fatal accident inside,	152
Number of persons employed per non-fatal accident outside,	180
Number of wives made widows,	17
Number of children made orphans,	46
Number of steam locomotives used inside of mines,	.....
Number of steam locomotives used outside,	27
Number of compressed air locomotives used inside,	10
Number of compressed air locomotives used outside,	.....
Number of electric motors used inside,	9
Number of electric motors used outside,	.....
Number of fans in use,	46
Number of furnaces in use,	.....
Number of gaseous mines in operation,	41
Number of non-gaseous mines in operation,	2
Number of new mines opened,	1
Number of old mines abandoned,	1

TABLE A

PRODUCTION OF COAL

Names of Operators	Tons
Lehigh and Wilkes-Barre Coal Company,	2,301,414
Lehigh Valley Coal Company,	1,559,605
Delaware and Hudson Company,	873,674
Red Ash Coal Company,	224,941
North American Coal Company,	199,077
Pittston Coal Mining Company,	82,095
Total,	5,240,806

Production by Counties

Luzerne,	5,240,806

TABLE B.—Fatal and non-fatal accidents inside and outside of mines; number of tons of coal produced per accident; number of persons employed; number employed per accident

Names of Operators	Fatal Accidents			Non-Fatal Accidents			Tons of coal produced per fatal accident inside	Tons of coal produced per non-fatal accident inside	Number of employes inside	Number of employes outside	Total number of employes	Number of employes inside per fatal accident	Number of employes outside per fatal accident	Number of employes inside per non-fatal accident	Number of employes outside per non-fatal accident
	Inside	Outside	Total	Inside	Outside	Total									
Lehigh and Wilkes-Barre Coal Co.,	20	2	22	17	5	22	115,071	135,377	4,366	900	5,266	218	450	257	180
Lehigh Valley Coal Co.,	12	.....	12	20	4	24	129,967	77,980	2,323	747	3,070	194	.....	116	187
Delaware and Hudson Co.,	3	1	4	8	4	12	291,225	109,209	916	487	1,403	305	487	114	122
Red Ash Coal Co.,	1	.....	1	4	1	5	324,941	.....	327	284	611	327	.....	82	284
Pittston Coal Mining Co.,	.....	.....	.....	4	.....	4	.....	20,524	98	57	155	.....	.....	24	.....
Miscellaneous Companies,	.....	.....	.....	.....	.....	.....	.....	.....	.....	46	46	.....	.....	.....	.....
Totals and averages for district,	36	3	39	53	14	67	145,578	98,883	8,030	2,521	10,551	223	840	152	180

TABLE C.—Classification of Fatal Accidents Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Total	Percentages
Causes of Accidents Inside														
Falls of coal,	1			1			1			1	1		5	13.89
Falls of slate,			1					1			1		3	8.33
Falls of roof,		1			2		1	4				2	10	27.78
Mine cars,	1	1	2	2	2		1						9	25.00
Explosions of gas,											1		1	2.78
Suffocation by gas, etc.,			1										1	2.78
Explosions of powder and dynamite,												2	2	5.55
Blasts, premature and otherwise,				1	1							1	3	8.33
Falling into shafts,				1									1	2.78
Miscellaneous,	1												1	2.78
Totals,	3	2	4	5	5		3	5		1	3	5	36	100.00
Causes of Accidents Outside														
Cars,			1		1								2	66.67
Suffocation in chutes, etc.,		1											1	33.33
Totals,		1	1		1								3	100.00
Grand totals inside and outside,	3	3	5	5	6		3	5		1	3	5	39	

TABLE D.—Classification of Non-Fatal Accidents Inside and Outside of Mines

	Months													
	January	February	March	April	May	June	July	August	September	October	November	December	Total	Percentages
Causes of Accidents Inside														
Falls of coal,		2		2	1			1	1	1	1	1	10	18.87
Falls of slate,		1	1						1				3	5.66
Falls of roof,		2	1			1	3			2		2	11	20.76
Mine cars,	2	1			3				1		1	3	11	20.76
Explosions of powder and dynamite,			1										1	1.88
Mules,		1							1				2	3.77
Miscellaneous,		2	2	2	1	1		1	4		2		15	28.30
Totals,	2	9	5	4	5	2	3	2	8	3	4	6	53	100.00
Causes of Accidents Outside														
Cars,		1					1	1			1	2	6	42.86
Machinery,							1			2			3	21.43
Miscellaneous,		1	1	1	1						1		5	35.71
Totals,		2	1	1	1		2	1		2	2	2	14	100.00
Grand totals inside and outside,	2	11	6	5	6	2	5	3	8	5	6	8	67	

TABLE E.—Occupations of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Total
Inside													
Miners,	2		1	1	3			4		1	3	3	18
Miners' laborers,			1	2			2	1				2	8
Drivers and runners,	1				2								3
Timber men,							1						1
Machinists,		1											1
Foot men,		1											1
Shaft men,				1									1
Track men			2										2
Locomotive helpers,				1									1
Totals,	3	2	4	5	5		3	5		1	3	5	36
Outside													
Blacksmiths and carpenters,			1										1
Jig men,					1								1
Laborers,		1											1
Totals,		1	1		1								3
Grand totals inside and outside,	3	3	5	5	6		3	5		1	3	5	39

TABLE F.—Occupations of Persons Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Total
Inside													
Mine foremen,												1	1
Assistant mine foremen,											1		1
Miners,		4	1	1	2			2	3	1	2	2	18
Miners' laborers,		2	1	1			3		2	1		1	11
Drivers and runners,		1	1		2				1			1	6
Doorboys and helpers,	2	1	1			1			1			1	7
Timber men,			1	1		1				1			4
Brattice men,		1											1
Foot men,											1		1
Charge men,									1				1
Machinists,				1									1
Skate men,					1								1
Totals,	2	9	5	4	5	2	3	2	8	3	4	6	53
Outside													
Blacksmiths and carpenters,					1								1
Laborers,							1				1	1	3
Slatepickers (boys),		1	1							2			4
Loaders,		1										1	2
Timber men,											1		1
Truck men,				1									1
Spraggers,								1					1
Feeders,							1						1
Totals,		2	1	1	1		2	1		2	2	2	14
Grand totals inside and outside,	2	11	6	5	6	2	5	3	8	5	6	8	67

TABLE G.—Nationality of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Total
American,	1	3	2	2									8
Welsh,							1						1
Irish,			1		1								2
Polish,	2		2	2	3		1	3		1	1	3	18
Italian,											1		1
Lithuanian,				1	1		1	2			1	1	7
Russian,					1							1	2
Totals,	3	3	5	5	6		3	5		1	3	5	39

TABLE H.—Nationality of Persons Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Total
American,	2	4	1	1					2	2		2	14
English,				1		1							2
Welsh,					2			1	1	1	1	2	8
Irish,			1	1				1				1	4
German,						1					2		3
Polish,		4	2	1	1		3		4		1	2	18
Hungarian,											1		1
Slavonian,			1		2		1					1	5
Lithuanian,		2					1	1	1				5
Austrian,			1	1							1		3
Russian,		1								1			2
Swedish,					1					1			2
Totals,	2	11	6	5	6	2	5	3	8	5	6	8	67

TABLE I.—Operators and mines, kind of openings, type and size of fans, size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents and number of persons employed inside

Names of Operators and Mines	Kind of opening	Gaseous or non-gaseous	Method of ventilation	Diameter of fan in feet and inches	Width of blades in feet and inches	Depth of blades in feet and inches	Number of revolutions per minute	Water gauge developed—in inches	Name of fan	Power used	Number of splits of air currents	Number of cubic feet of air per minute entering the mine at inlet	Total quantity of air per minute circulating in all the splits in cubic feet	Number of cubic feet per minute passing out at outlet	Number of persons employed inside
Lehigh and Wilkes-Barre Coal Co.															
Hollenback No. 2 Colliery:															
Hollenback No. 1,	Shaft,	Gaseous,	2 Fans,	35	11.6	8.9	42	.9	Guibal,	Steam,	16	480,550	394,890	489,850	550
Hollenback No. 2,*	Slope,	Gaseous,		24	7.11	6.0	61	.9							
Hollenback No. 3,	Shaft,	Gaseous,	2 Fans,	35	11.9	8.9	45	1.1							
Hollenback No. 4,*	Slope,	Gaseous,		35	11.9	8.9	45	1.1							
South Wilkes-Barre No. 5 Colliery:															
South Wilkes-Barre No. 1,	Shaft,	Gaseous,	2 Fans,	35	11.9	8.9	45	1.6	Guibal,	Steam,	31	465,294	356,035	497,500	911
South Wilkes-Barre No. 2,*	Shaft,	Gaseous,		35	11.9	8.9	45	1.6							
South Wilkes-Barre No. 3,	Shaft,	Gaseous,	2 Fans,	35	11.9	8.9	45	1.8							
South Wilkes-Barre No. 4,*	Shaft,	Gaseous,		35	11.9	8.9	45	1.8							
Stanton No. 7 Colliery:															
Empire No. 2,	Shaft,	Gaseous,	Fan,	24	8.0	6.0	60	1.1	Guibal,	Steam,	17	295,640	261,360	325,880	560
Stanton No. 2,	Slope,	Gaseous,	2 Fans,	35	11.9	8.9	44	1.5							
Stanton No. 4,	Shaft,	Gaseous,		34.6	11.9	8.45	44	1.5							
Sugar Notch No. 9 Colliery:															
Sugar Notch No. 1,	Tunnel,	Gaseous,	Fan,	20	6.8	5.0	72	1.2	Guibal,	Steam,	15	377,000	324,755	461,905	565
Sugar Notch No. 2,	Shaft,	Gaseous,	Fan,	24	8.0	6.0	55	1.2							

*Emergency fans.

Maxwell No. 20 Colliery:																
Maxwell No. 1,	Slope,	Gaseous,	2 Fans,‡	25	8.2	6.3	80	1.1	Guibal,	Steam,	26	431,057	399,248	472,300	725	
Maxwell No. 2,*	Slope,	Gaseous,		24	8.0	6.0	80	1.1								
Maxwell No. 3,	Shaft,	Gaseous,	2 Fans,‡	35	11.9	8.9	45	1.2								
Maxwell No. 4,*	Shaft,	Gaseous,		35	11.9	8.9	45	1.2								
Lehigh Valley Coal Co.																
Prospect Colliery:																
Prospect No. 1,	Shaft,	Gaseous,	2 Fans,‡	30	9.0	8.0	52	1.7	Guibal,	Steam,	7	161,000	149,312	167,212	145	
Prospect No. 2,*	Shaft,	Gaseous,		25	8.2	6.3	80	1.7								
Oakwood,	Shaft,	Gaseous,	Fan,	30	9.0	8.0	51	1.65	Guibal,	Steam,	8	185,934	174,843	189,654	310	
Midvale,	Slope,	Gaseous,	Fan,	20	6.6	5.3	66	1.2	Guibal,	Steam,	5	94,505	88,010	99,530	186	
Henry No. 1,	Shaft,	Gaseous,	Fan,	30	10.0	8.0	50	1.7	Guibal,	Steam,	8	142,580	112,620	172,560	240	
Henry No. 2,	Shaft,	Gaseous,	Fan,	28	6.6	7.6	46	.8	Dixon,	Steam,	2	82,160	62,174	98,764		
Wyoming,	Shaft,	Gaseous,	Fan,	25	7.0	6.0	50	.9	Guibal,	Steam,	8	135,260	120,876	164,875	112	
Henry Red Ash,	Shaft,	Gaseous,	Fan,	28	6.6	7.6	45	1.2	Dixon,	Steam,	5	173,520	156,290	187,640	214	
Wyoming,	Slope,	Gaseous,	Double Fan.	15	4.6	3.8	80	1.	Guibal,	Steam,	4	78,562	62,784	98,644	120	
Hillman,	Slope,	Gaseous,	Double Fan.	15	4.6	3.8	80	1.	Guibal,	Steam,						
Dorrance Colliery:																
Baltimore,	Shaft,	Gaseous,	Fan,	28	10.0	8.0	58	1.6	Guibal,	Steam,	10	211,891	180,354	240,425	188	
Hillman,	Shaft,	Gaseous,	Fan,	35	12.0	10.2	47	2.3	Guibal,	Steam,	9	170,488	129,584	180,058	351	
Hillman,†	Shaft,	Gaseous,	Fan,	30	10.0	8.0	54	------	Dixon,	Steam,						
Franklin Colliery:																
Rock Slope,	Slope,	Gaseous,	Fan,	20	6.0	5.9	75	1.5			6	118,000	68,000	133,000	178	
Kidney,†	Slope,	Gaseous,	Fan,	14	6.0	4.0	90	.8	Guibal,	Steam,	4	45,000	32,000	56,000	44	
Sump,	Slope,	Gaseous,	Fan,	15	6.0	3.9	90	.8			1	34,200	21,200	39,300	52	
Baltimore,	Slope,	Gaseous,	Fan,	15	4.6	4.6	90	.8			2	31,300	28,300	34,300	47	
Warrior Run Colliery:																
No. 1 Slope,	Slope,	Gaseous,	Fan,	20	6.6	5.0	72	.4	Guibal,	Steam,	4	117,000	109,000	123,000	111	
Delaware and Hudson Co.																
Baltimore No. 5 Colliery:																
Baltimore No. 2,	Shaft,	Gaseous,	Fan,	17.5	5.3	4.8	60	2.3	Guibal,	Steam,	3	117,810	102,385	131,495	154	
Baltimore No. 5,	Shaft,	Gaseous,	2 Fans,‡	28	7.0	5.6	------	------	Guibal,	Steam,	5	175,850	145,900	202,540	239	
	Shaft,	Gaseous,		28	7.0	5.6	------	------	Guibal,	Steam,						
Baltimore Tunnel Colliery:																
Baltimore,	Tunnel,	Gaseous,	Double Fan.	18	6.0	5.0	52	.9	Guibal,	Steam,	4	105,790	84,600	122,530	138	
G Vein,	Shaft,	Gaseous,	Fan,	8	3.0	2.2	75	.8	Guibal,	Steam,	3	22,820	20,100	24,680	71	
Conyngham Colliery:																
Baltimore,	Shaft,	Gaseous,	Fan,	17	5.4	4.0	90	1.7	Guibal,	Steam,	4	135,360	122,680	158,010	60	
Hillman,	Shaft,	Gaseous,	Fan,	20	5.8	5.0	78	1.8	Guibal,	Steam,	3	85,800	81,570	89,970	134	

†Force fan.
‡Emergency fan for either shaft.
*Emergency fans.

TABLE I—Continued

Names of Operators and Mines	Kind of opening	Gaseous or non-gaseous	Method of ventilation	Diameter of fan in feet and inches	Width of blades in feet and inches	Depth of blades in feet and inches	Number of revolutions per minute	Water gauge developed—In inches	Name of fan	Power used	Number of splits of air currents	Number of cubic feet of air per minute entering the mine at inlet	Total quantity of air per minute circulating in all the splits in cubic feet	Number of cubic feet per minute passing out at outlet	Number of persons employed inside
Red Ash Coal Co.															
Red Ash No. 2 Colliery:															
Red Ash No. 1,	Slope,	Non-gas.,	Fan,	15	5.0	3.9	78	1.5	Vulcan,	Steam,	4	56,500	51,000	59,400	200
Red Ash No. 2,	Slopes and Tunnels.	Gaseous,	Fan,	15	5.0	3.9	65	1.5	Vulcan,	Steam,	3	59,340	16,350	62,510	127
Pittston Coal Mining Co.															
Hadleigh Colliery:															
Hadleigh,	Shaft,	Gaseous,	Fan,	17	4.6	5.6	60	1.5	Tamaqua,	Steam,	3	45,000	38,000	47,000	98

TABLE 1.—Operators, location of collieries, railroads, etc.

Names of Operators and Collieries	County	Name of General Superintendent	Post Office	Name of Superintendent	Post Office	Railroad to Mine
Lehigh and Wilkes-Barre coal Co. Hollenback No. 2, South Wilkes-Barre No. 5, Stanton No. 7, Sugar Notch No. 9, Maxwell No. 20, Empire Washery,	Luzerne,	C. F. Huber,	Wilkes-Barre,	William H. Herring, Outside Superintendent. Morgan R. Morgans, Inside Superintendent.	Wilkes-Barre,	C. R. R. of N. J.
Lehigh Valley Coal Co. Prospect, Dorrance, Franklin, Warrior Run, Prospect Washery, Henry Washery,	Luzerne,	S. D. Warriner,	Wilkes-Barre,	Thomas Thomas,	Dorranceton,	Lehigh Valley.
Delaware and Hudson Co. Baltimore No. 5, Baltimore Tunnel, Conyngham, Baltimore Slope Washery, Baltimore Tunnel Washery, Conyngham Washery,	Luzerne,	C. C. Rose,	Scranton,	E. R. Pettebone,	Dorranceton,	Delaware and Hudson.
Red Ash Coal Co. Red Ash No. 2,	Luzerne,	T. F. Mimford,	Wilkes-Barre,	T. F. Mimford,	Wilkes-Barre,	C. R. R. of N. J.
North American Coal Co. Sugar Notch Washery,	Luzerne,	H. W. Saums,	Wilkes-Barre,	H. W. Saums,	Wilkes-Barre,	C. R. R. of N. J.
Pittston Coal Mining Co. Hadleigh,	Luzerne,	O. M. O'Boyle,	Dorranceton,	John J. O'Boyle,	Scranton,	C. R. R. of N. J.

TABLE 2.—Number of tons of coal mined, number of days worked, number of persons employed, number killed and injured, quantity of powder, dynamite and so-called safety explosives used, etc.

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Explosives: Number of pounds of powder used	Explosives: Number of pounds of dynamite used	Explosives: Number of pounds of so-called safety explosives used	Number of horses and mules
Lehigh and Wilkes-Barre Coal Co.													
Hollenback No. 2,	Luzerne,	219,442	41,034	24,197	284,673	154	846	5	2	211,700	22,200	16,225	101
South Wilkes-Barre No. 5,		391,716	32,529	75,326	499,571	200	1,331	1	6	428,050	51,935	26,320	134
Stanton No. 7,		405,708	52,943	12,090	470,741	165	1,230	7	7	387,725	32,460	9,132	46
Sugar Notch No. 9,		291,620	17,058	6,102	314,780	199	749	1	2	277,600	37,017	12,511	87
Maxwell No. 20,		538,650	47,107	9,506	595,263	197	1,078	8	5	388,200	47,750	19,441	128
		1,847,136	190,671	127,221	2,165,028	.....	5,234	22	22	1,693,275	191,362	83,629	496
Empire Washery,	Luzerne,	136,386	.....	.....	136,386	241	32	....	....	.....	.....	.....	1
Totals,		1,983,522	190,671	127,221	2,301,414	.....	5,266	22	22	1,693,275	191,362	83,629	497
Lehigh Valley Coal Co.													
Prospect,	Luzerne,	697,063	68,793	3,678	769,534	225	1,699	8	11	542,550	170,070	50	263
Dorrance,		276,819	38,945	35,862	351,626	203	682	3	8	273,325	12,430	28,725	94
Franklin,		223,461	28,705	6,940	259,106	225	490	1	4	172,425	28,207	.....	82
Warrior Run,		55,208	8,178	45	63,431	194	153	....	1	39,050	709	.....	17
		1,252,551	144,621	46,525	1,443,697	.....	3,024	12	24	1,027,350	211,416	28,775	456
Washeries													
Prospect,	Luzerne,	72,823	.....	.....	72,823	293	12	....	....	.....	.....	.....	.....
Henry,		24,570	18,515	.....	43,085	112	34	....	....	.....	.....	.....	2
		97,393	18,515	.....	115,908	.....	46	....	....	.....	.....	.....	2
Totals,		1,349,944	163,136	46,525	1,559,605	.....	3,070	12	24	1,027,350	211,416	28,775	458

Delaware and Hudson Co.													
Baltimore No. 5,	Luzerne,	305,388	30,141	----	335,529	182	821	1	9	250,750	2,274	----	71
Baltimore Tunnel,		165,549	2,776	7,262	175,587	151	407	2	----	124,050	2,167	----	53
Conyngham,		6,513	782	304	7,599	18	88	----	2	5,600	16	----	19
		477,450	33,699	7,566	518,715	----	1,316	3	11	380,400	4,457	----	143
Washeries													
Baltimore Slope,	Luzerne,	196,874	30,141	----	227,015	228	49	----	1	----	----	----	----
Baltimore Tunnel,		44,239	47,015	----	91,254	167	27	----	----	----	----	----	----
Conyngham,		4,714	31,976	----	36,690	22	11	1	----	----	----	----	----
		245,827	109,132	----	354,959	----	87	1	1	----	----	----	----
Totals,		723,277	142,831	7,566	873,674	----	1,403	4	12	380,400	4,457	----	143
Red Ash Coal Co.													
Red Ash No. 2,	Luzerne,	206,996	9,070	8,875	224,941	175	611	1	5	79,425	25,200	----	56
North American Coal Co.													
Sugar Notch Washery,	Luzerne,	195,243	3,650	184	199,077	277	46	----	----	----	----	----	----
Pittston Coal Mining Co.													
Hadleigh,	Luzerne,	74,386	7,000	709	82,095	126	155	----	4	34,525	4,225	4,200	15
Grand totals,		4,533,368	516,358	191,080	5,240,806	----	10,551	39	67	3,214,975	436,660	116,604	1,169

TABLE 2.—Part 2.

Names of Operators	County	Number of Boilers					Locomotives			Number of steam engines of all classes	Total horse power	Number of pumps delivering water to surface	Capacity in gallons per minute	Quantity delivered to surface per minute—gallons	Number of electric dynamos	Number of air compressors
		Cylindrical	Horse power	Tubular	Horse power	Total horse power	Steam	Air	Electric							
Lehigh and Wilkes-Barre Coal Co.,	Luzerne,	----	--------	55	11,317	11,317	7	9	------	256	19,984	15	16,486	9,630	----	13
Lehigh Valley Coal Co.,		----	--------	45	9,475	9,475	15	1	5	139	15,471	14	10,345	7,060	5	11
Delaware and Hudson Co.,		27	729	28	5,900	6,629	2	------	4	133	8,902	13	10,500	4,950	3	2
Red Ash Coal Co.,		----	--------	3	900	900	3	------	------	25	1,257	3	810	475	----	----
North American Coal Co.,		----	--------	2	500	500	------	------	------	11	330	------	------	------	----	----
Pittston Coal Mining Co.,		----	--------	2	600	600	------	------	------	13	2,525	2	900	800	----	----
Totals,		27	729	135	28,692	29,421	27	10	9	577	48,559	47	39,041	22,915	8	26

TABLE 3.—Number of each class of employes inside and outside of mines

Names of Operators	County	Inside											Outside									Grand total inside and outside
		Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Doorboys and helpers	Pumpmen	Company men	All other employes	Total inside	Superintendents	Foremen	Blacksmiths and carpenters	Engineers and firemen	Slate pickers (boys)	Slate pickers (men)	Bookkeepers and clerks	All other employes	Total outside	
Lehigh and Wilkes-Barre Coal Co.,	Luzerne,	6	8	47	1,781	1,142	421	266	21	398	276	4,366	----	6	32	135	215	46	20	446	900	5,266
Lehigh Valley Coal Co.,		11	43	----	854	466	324	94	33	------	498	2,323	1	6	63	118	59	18	14	468	747	3,070
Delaware and Hudson Co.		4	2	12	282	267	91	16	17	203	22	916	----	4	21	73	126	48	7	208	487	1,403
Red Ash Coal Co.,		2	----	----	118	102	32	10	4	59	------	327	1	5	11	19	26	38	2	182	284	611
North American Coal Co.		----	----	----	----	----	----	----	----	----	----	----	1	1	2	6	9	------	1	26	46	46
Pittston Coal Mining Co.,		1	----	1	42	25	6	3	2	8	10	98	1	2	4	11	12	------	1	26	57	155
Totals,		24	53	60	3,077	2,002	874	389	77	668	806	8,030	4	24	133	362	447	150	45	1,356	2,521	10,551

TABLE 3.—Part 2

Names of Operators	County	Average Number of Days Worked in Breaker												
		January	February	March	April	May	June	July	August	September	October	November	December	Total
Lehigh and Wilkes-Barre Coal Co.,	Luzerne,	16	11	18	21	14	14	9	10	13	17	22	18	183
Lehigh Valley Coal Co.,		17	13	19	16	21	22	15	16	12	18	21	22	212
Delaware and Hudson Co.,		10	8	8	9	11	11	8	10	10	11	11	10	117
Red Ash Coal Co.,		18	15	18	18	12	13	8	9	11	14	19	20	175
Pittston Coal Mining Co.,		16	12	13	10	5	8	3	8	12	13	13	13	126

TABLE 4.—Fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Colliery	County	Nature and Cause of Accident in Brief
Jan. 6	Frank Starr,	Polish,	Miner,	42	M.	1		Baltimore No. 5,		Fatally injured by fall of coal while barring loose coal after a blast, at face of chamber. Died January 17.
15	Andrew Sabol,	American,	Runner,	22	S.			Prospect,		Fatally injured by being caught between two loaded cars on gangway road.
29	Jake Barinoki,	Polish,	Miner,	43	M.	1	3	Maxwell No. 20,		Fatally injured. A piece of loose coal slid down the chamber and struck him in the abdomen.
Feb. 7	Robert Daniels,	American,	Laborer,	21	S.			Conyngham Washery.		Killed by being smothered by hot culm. Outside.
22	John Cunningham,	American,	Machinist,	38	S.			Stanton No. 7,		Killed by fall of top rock while fighting mine fire.
24	Charles McCarthy,	American,	Plane foot-man,	27	S.			South Wilkes-Barre No. 5.		Fatally injured by being squeezed between loaded cars at foot of slope.
March 3	John Walsh,	Irish,	Co. laborer,	35	S.			Baltimore Tunnel,	Luzerne.	Suffocated by smoke from mine fire while on his way out of the slope.
6	Dennis Moore,	American,	Carpenter,	62	M.	1	1	Stanton No. 7,		Fatally injured by being struck by a trip of fuel cars. Outside.
13	Adolph Gill,	Polish,	Laborer,	22	S.			Hollenback No. 2,		Killed by a runaway trip at face of slope.
16	Joseph Grysick,	Polish,	Miner,	36	M.	1	5	Maxwell No. 20,		Killed by fall of middle rock at face of chamber.
27	Patrick McGuire,	American,	Tracklayer helper.	30	M.	1	2	Stanton No. 7,		Killed by runaway trip of empty cars on slope.
April 3	Frank Kirhuff,	American,	Shaftman,	47	M.	1	4	Hollenback No. 2,		Killed by falling off platform down shaft.
5	Joseph Rutkoskie,	Lithuanian,	Laborer,	17	S.			Hollenback No. 2,		Fatally injured by fall of bony coal at face of chamber. Died the same day.
9	Belopstos Stepocokise,	Polish,	Laborer,	22	S.			Stanton No. 7,		Killed by a runaway trip of empty cars on slope.
19	Raymond Caffrey,	American,	Locomotive helper.	18	S.			Maxwell No. 20,		Killed by being caught under a loaded car at head of slope.
23	Frank Peruck,	Polish,	Miner,	45	S.			Franklin,		Killed by a premature blast.
May 1	Alex Vilinsky,	Polish,	Driver,	18	S.			Prospect,		Killed by falling under a loaded car on gangway road.

TABLE 4—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Colliery	County	Nature and Cause of Accident in Brief
May 3	David Walsh,	Irish,	Driver boss,	40	M.	1	5	Prospect,		Fatally injured by a runaway trip of loaded cars on slope. Died May 31.
19	Paul Lipski,	Polish,	Miner,	44	M.	1	4	Maxwell No. 20,		Killed by fall of middle rock at face of chamber.
26	Joseph Kutscavage,	Lithuanian,	Jigman,	19	S.			Stanton No. 7,		Fatally injured by being struck by railroad cars. Outside.
28	John Sigel,	Polish,	Miner,	27	S.			Dorrance,		Killed by a premature blast.
28	Wassil Zoboloskie,	Russian,	Miner,	40	M.	1	5	Red Ash No. 2,		Killed by fall of top rock at face of chamber.
July 13	Michael Lougont,	Polish,	Laborer,	28	S.			Baltimore Tunnel,		Fatally injured by fall of top coal at face of chamber. Died the same day.
21	William M. Evans,	Welsh,	Timberman,	42	M.	1	7	Hollenback No. 2,		Fatally injured by fall of top rock at face of gangway while fighting mine fire. Died July 24.
30	Charles Steropolski,	Lithuanian,	Laborer,	19	S.			Maxwell No. 20,	Luzerne,	Killed by a runaway trip of loaded cars on slope. He was stealing a ride on rear end of trip.
Aug. 12	Michael Vengenavage,	Polish,	Miner,	40	M.	1		Maxwell No. 20,		Killed by fall of top rock at face of chamber.
18	Stephen Butscoski,	Polish,	Miner,	21	M.	1		Hollenback No. 2,		Killed by fall of middle rock at face of heading.
27	Thomas Caselonis,	Lithuanian,	Miner,	29	M.	1		Stanton No. 7,		Fatally injured by fall of top rock at face of chamber. Died September 3.
27	Domnick Martincavage	Lithuanian,	Laborer,	24	S.			Stanton No. 7,		Killed by the same fall of rock.
30	Martin Dailida,	Polish,	Miner,	24	S.			Maxwell No. 20,		Killed by fall of top rock at face of chamber.
Oct. 27	Alex Poposki,	Polish,	Miner,	30	M.	1		Prospect,		Fatally injured by fall of top coal at face of chamber. Died October 29.
Nov. 2	Joseph Koselski,	Lithuanian,	Miner,	41	M.	1	5	Dorrance,		Fatally injured by fall of middle rock at face of chamber. Died November 7.
5	Rudolph Sanlucci,	Italian,	Miner,	30	S.			Prospect,		Fatally burned by an explosion of gas. Died November 8.

Nov.	18	Barkley Wladwloski,	Polish,	Miner,	31	S.			Dorrance,	Luzerne,	Killed by fall of top coal at face of chamber.
Dec.	1	John Gunsheroski,	Polish,	Laborer,	21	S.			Sugar Notch No. 9,		Killed by premature blast while charging a rock hole with giant powder with steel jumper.
	2	John Shorry,	Polish,	Miner,	43	S.			Maxwell No. 20,		Fatally injured by fall of top rock at face of gangway. Died December 3.
	17	Peter Sopchick,	Russian,	Miner,	32	M.	1	2	Prospect,		Killed by fall of top rock at face of counter.
	20	William Chebuska,	Lithuanian,	Miner,	25	M.	1	3	Prospect,		Fatally injured by explosion of powder. Died December 25.
	20	John Polkitus,	Polish,	Laborer,	22	S.			Prospect,		Fatally injured by explosion of powder. Died December 31.

TABLE 5.—Non-fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Colliery	County	Nature and Cause of Accident in Brief
Jan. 5	George Sobel,	American,	Patcher,	19	S.	Stanton No. 7,		Foot crushed. He was caught between bumpers of cars at foot of shaft while uncoupling them.
25	Joseph Heffern,	American,	Patcher,	18	S.	Stanton No. 7,		Left leg fractured by being caught under oil box of loaded car in coupling car while in motion.
Feb. 4	Joseph Staffanovich,	Polish,	Laborer,	33	M.	Baltimore No. 5,		Right arm broken. While lifting a prop it fell on his arm.
5	Felix Lawarnce,	American,	Patcher,	17	S.	Stanton No. 7,		Arm fractured by being kicked by a mule.
6	John O'Donnell,	American,	Loader,	30	S.	Prospect,		Hand crushed by being caught between cars. Outside.
8	Percy Hennehan,	American,	Slate picker,	14	S.	Baltimore Slope Washery.		Fractured wrist by falling off banister. Outside.
9	Edward Disoski,	Polish,	Laborer,	34	M.	Dorrance,		Left leg fractured by fall of top rock at face of chamber.
10	Harry Parence,	American,	Driver,	34	M.	Dorrance,	Luzerne,	Leg fractured by falling under a loaded car on gangway road.
	Felex Promisky,	Polish,	Miner,	23	M.	Baltimore No. 5,		Compound fracture of leg by fall of top coal at face of chamber.
11	Peter Delinsky,	Polish,	Miner,	42	M.	Hadleigh,		Leg fractured by a piece of rock sliding down the chamber and striking him
12	Mike Mallis,	Russian,	Bratticeman,	30	M.	Prospect,		Two ribs broken and back bruised by fall of coal off rib while removing prop.
15	Joe Lodis,	Lithuanian,	Miner,	29	S.	Dorrance,		Two toes crushed by a piece of middle rock falling on his left foot at face of chamber.
16	Jacob Jasok,	Lithuanian,	Miner,	52	M.	Prospect,		Right leg fractured by fall of top rock at face of chamber.
March 11	John Frankovich,	Slavonian,	Doorboy,	17	S.	Hadleigh,		Left hand badly shattered, part of fingers and thumb blown off, while picking an exploder with a pin.
16	Michael Ryan,	Irish,	Timberman,	47	M.	Prospect,		Right hip dislocated. He was caught under a fall of roof on gangway road.

March	21	Walter Palvician,	Austrian,	Miner,	32	M.	Dorrance,		Leg broken by fall of middle rock at face of chamber.
	22	Patrick Cleary,	American,	Slate picker,	15	S.	Maxwell No. 20,		Scapula bone broken. While closing a gate he lost his balance and fell on his shoulder. Outside.
	25	Anthony Beloski,	Polish,	Driver,	22	S.	Stanton No. 7,		Left arm fractured by a piece of iron flying from a slush pipe that burst.
	26	Joseph Littleton,	Polish,	Laborer,	32	M.	Dorrance,		Arm fractured by jumping on shaft carriage after it had left the bottom.
April	2	Michael Nealon,	Irish,	Miner,	44	M.	Maxwell No. 20,		Ribs fractured and jaw bone broken by fall of bony coal at face of chamber.
	3	John Fuke,	Polish,	Laborer,	22	S.	Franklin,		Right leg fractured and nose cut by fall of top coal at face of chamber.
	16	Steve Appcheck,	Austrian,	Truckman,	45	M.	Hollenback No. 2,		Right thumb crushed by being caught between door rod and friction hook. Outside.
	26	Frederick May,	English,	Machinist,	53	M.	Conyngham,		Leg bruised and small bone fractured by a cast iron rolling against it.
	26	John Gallagher,	American,	Timberman,	26	S.	Baltimore No. 5,		Knee fractured by a slush line pipe bursting and striking him on the knee.
May	7	Mike Kometz,	Slavonian,	Carpenter,	28	M.	Prospect,		Shoulder broken by a piece of plank falling on him. Outside.
	11	Otto Hakanson,	Swedish,	Slateman,	22	S.	Sugar Notch No. 9,	Luzerne,	Left arm broken by being caught between car and door post on gangway road.
	18	Evan Coates,	Welsh,	Driver,	24	M.	Hollenback No. 2,		Right leg fractured. A loaded car jumped off the track and struck his leg, in rock dump.
	18	Victor Sockaliski,	Polish,	Driver,	19	S.	Franklin,		Hip dislocated. He was caught between loaded car and platform on gangway road.
	20	Samuel Moyle,	Welsh,	Miner,	55	M.	Red Ash No. 2,		Left arm fractured by a collar falling on him while putting up a set of timber.
	27	Andrew Sureuda,	Slavonian,	Miner,	41	M.	Maxwell No. 20,		Small bone of right leg fractured by a piece of top bony coal falling on it, at face of chamber.
June	9	Edward Philips,	English,	Timberman,	58	M.	Dorrance,		Ribs fractured by a piece of top rock falling on him on slope.
	9	Frank Hoffman,	German,	Doorboy,	16	S.	Prospect,		Left wrist fractured by falling off an empty car on gangway road.
July	2	Charles Sedar,	Slavonian,	Laborer,	23	S.	Baltimore No. 5,		Left foot crushed by falling under a mine locomotive. Outside.
	9	John Niscovitch,	Polish,	Feeder,	30	M.	Prospect,		Left leg fractured at thigh while putting a belt on wheel. Outside.
	10	Jake Prutzner,	Polish,	Laborer,	34	M.	South Wilkes-Barre No. 5.		Left leg fractured by a piece of top rock falling on him at face of heading.
	10	Joseph Waloko,	Polish,	Laborer,	23	S.	Stanton No. 7,		Legs fractured by fall of top rock at face of chamber.

TABLE 5—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Colliery	County	Nature and Cause of Accident in Brief
July 28	Anthony Boltashitus,	Lithuanian,	Laborer,	20	S.	Prospect,		Right hip dislocated by a piece of top rock falling on him at face of chamber.
Aug. 5	Thomas Donnelly,	Irish,	Miner,	49	M.	Dorrance,		Ribs and left arm fractured by a piece of coal falling off rib.
12	Joseph Dimmick,	Lithuanian,	Spragger	17	S.	South Wilkes-Barre No. 5.		Thumb and index finger crushed while spragging a loaded car. Outside.
19	Aneurian Lloyd,	Welsh,	Miner,	57	M.	Warrior Run,		Leg fractured by a piece of rock falling off gob and striking him.
Sept. 1	Adam Montate,	Lithuanian,	Miner,	23	S.	South Wilkes-Barre No. 5.		Third finger of left hand crushed by being struck with a hammer.
7	Michael Turski,	Polish,	Laborer,	40	M.	Baltimore No. 5,		Fractured leg by a fall of top coal at face of chamber.
7	Thomas Morgan,	Welsh,	Chargeman,	47	M.	Conyngham,		Arm fractured. He fell against a main door, which closed on his arm.
15	Steve Jeleski,	Polish,	Miner,	48	M.	Maxwell No. 20,	Luzerne,	Left leg fractured below knee by some loose coal sliding down the pitch on him.
23	Edward Petrulias,	Polish,	Doorboy,	16	S.	Sugar Notch No. 9,		Arm fractured by being caught between door frame and mule's collar.
24	Stanley Sogosky,	Polish,	Laborer,	26	S.	Stanton No. 7,		Wrist fractured. While rolling a stick of timber it fell on his arm.
28	Steve Crumley,	American,	Miner,	42	M.	Hadleigh,		Arm fractured and back bruised by fall of middle rock at face of chamber.
30	John Kane,	American,	Runner,	29	M.	Baltimore No. 5,		Leg fractured below knee. A loaded car jumped the track on gangway road and struck him.
Oct. 8	Edward McGinty,	American,	Slate picker,	14	S.	Baltimore No. 5,		Compound fracture of left arm. While putting belt on wheel his arm was caught. Outside.
9	Griffith Owens,	Welsh,	Miner,	43	M.	South Wilkes-Barre No. 5.		Right leg fractured by fall of roof at face of chamber.
14	Isiot Kurcrucky,	Russian,	Laborer,	21	S.	Baltimore No. 5,		Right leg and right arm fractured by a piece of rock falling on him at face of chamber.

Oct.	23	James Boyle,	American,	Slate picker,	16	S.	Baltimore No. 5,		Compound fracture of right leg below knee, by slipping on belt to start it, he fell in the pulley. Outside.
	30	Martin Johnston,	Swedish,	Timberman,	44	M.	Prospect,		Three ribs fractured by fall of top coal that he was taking down on gangway road.
Nov.	9	Peter Stininsky,	Polish,	Miner,	33	M.	Hadleigh,		Ankle broken by a piece of top coal sliding down the chamber and striking him.
	11	Charles Haines,	Austrian,	Miner,	41	M.	Red Ash No. 2,		Left leg fractured by a piece of coal that fell off rib on him.
	15	Mike Wathwatto,	Hungarian,	Laborer,	36	M.	Franklin,		Left hand badly crushed. While blocking a rock car it jumped the track and caught his hand. Outside.
	19	Charles Hammonds,	Welsh,	Assistant foreman,	45	M.	Prospect,		Compound fracture of right leg. A small piece of rock fell on top of carriage bonnet, glanced off and struck him.
	20	Joseph Luidorfer,	German,	Timberman,	40	M.	Stanton No. 7,	Luzerne,	Right ankle fractured by falling off railroad car among prop timber. Outside.
	23	Matt Siepply,	German,	Shaft footman,	56	M.	South Wilkes-Barre No. 5.		Index finger of right hand crushed. He was caught while blocking cars at foot of shaft.
Dec.	3	Michael Moges,	Slavonian,	Laborer,	28	M.	Red Ash No. 2,		Middle finger of right hand cut off by a piece of coal falling on it.
	4	Frank McAnnany,	American,	Driver,	18	S.	South Wilkes-Barre No. 5.		Leg fractured by being caught between car and door frame on gangway road.
	5	John S. Hammonds,	Welsh,	Mine foreman,	36	M.	Prospect,		Left foot crushed by being caught between rib and car that jumped the track on slope.
	7	Charles Novack,	Polish,	Doorboy,	16	S.	Dorrance,		Third finger of left hand cut off. He was caught between top of loaded car and roof on gangway road.
	10	John C. Williams,	Welsh,	Miner,	26	M.	Franklin,		Knee and wrist dislocated by a piece of rock falling from the roof at face of chamber.
	13	Leo Bochick,	Polish,	Car loader,	28	S.	Red Ash No. 2,		Right knee fractured. He was caught between railroad car under the breaker. Outside.
	14	Thomas Powell,	American,	Laborer,	64	M.	Maxwell No. 20,		Right leg fractured below knee by being caught between cars. Outside.
	23	Peter P. Lyons,	Irish,	Miner,	50	M.	Red Ash No. 2,		Leg fractured by a piece of top rock falling on it at face of chamber.

CONDITION OF COLLIERIES

LEHIGH AND WILKES-BARRE COAL COMPANY

Hollenback No. 2.—Ventilation, roads and drainage good; condition as to safety, good.

South Wilkes-Barre No. 5.—Ventilation, roads and drainage good; condition as to safety, good.

Stanton No. 7.—Ventilation, roads and drainage good; condition as to safety, good.

Sugar Notch No. 9.—Ventilation good, roads and drainage fair; condition as to safety, good.

Maxwell No. 20.—Ventilation, roads and drainage good; condition as to safety, good.

LEHIGH VALLEY COAL COMPANY

Prospect.—Ventilation good; roads and drainage fair; condition as to safety, good.

Dorrance.—Ventilation good; roads and drainage fair; condition as to safety, good.

Franklin.—Ventilation good; roads and drainage fair; condition as to safety, good.

Warrior Run.—Ventilation good; roads and drainage poor owing to robbing of pillars; condition as to safety, good.

DELAWARE AND HUDSON COMPANY

Baltimore No. 5.—General condition as to safety, good.

Baltimore Tunnel.—General condition as to safety, good.

Conyngham.—Ventilation good; general condition as to safety, good.

RED ASH COAL COMPANY

Red Ash No. 2.—Ventilation only fair, owing to robbing of pillars; general condition as to safety, good.

PITTSTON COAL MINING COMPANY

Hadleigh.—Ventilation and drainage fair; general condition as to safety, good.

IMPROVEMENTS

LEHIGH AND WILKES-BARRE COAL COMPANY

Hollenback No. 2 Colliery

Inside: No. 27 tunnel, Hillman to Kidney, No. 3 slope.

No. 23 tunnel, Hillman to Stanton.

Extension of No. 12 tunnel, Top Red Ash to Ross vein.

Outside: Hoisting engines, Baltimore shaft.
Remodeling breaker.
Steel head frame.
Dust system.

South Wilkes-Barre No. 5 Colliery

Inside: Extension No. 10 tunnel, Top to Bottom Baltimore.
No. 24 tunnel, Abbott to Hillman vein.

Stanton No. 7 Colliery

Inside: Rock plane airway, No. 12 tunnel west to No. 29 tunnel.
Extension of No. 13 tunnel to Hillman vein.
No. 15 tunnel, Hillman to Kidney, No. 6 plane counter.
Rock manway, No. 4 slope, Abbott vein.
No. 16 tunnel, Hillman to Kidney, No. 8 plane west.

Sugar Notch No. 9 Colliery

Inside: Extension No. 13 tunnel, Stanton to Hillman vein.
Extension No. 20 tunnel, Baltimore to Five Foot.
Tunnel, Twin to Cooper, No. 9 tunnel west.

Maxwell No. 20 Colliery

Inside: Tunnel, Ross to Twin, No. 18 tunnel west.
No. 23 tunnel, Baltimore to Five Foot.
Outside: Engines, etc., for No. 8 slope.

LEHIGH VALLEY COAL COMPANY

Prospect Colliery

Outside: Extensive repairs to breaker. Extension of the conveyor line to the washery. Changes to engine and drive for Prospect conveyor line and the construction of two overflow catch basins.

Inside: Midvale Hillman mule stable completed. The electric motor haulage, Red Ash vein, was extended to the extreme east. A concrete steel overcast constructed on the shaft level west district. Changes of head of No. 8 rock slope and installation of automatic head block.

Henry—Outside: A series of rock cover test holes for the Hillman vein were completed. An 8-inch Churn drill bore hole from the surface to the Red Ash vein for the changes in high pressure air line was completed. The Enterprise culm bank east of plank road is being hauled to the Henry Washery. A new Lehigh Valley Coal Company standard wooden head frame completed for No. 2 Red Ash shaft. The water course at Prospect was concrete lined with "I" beam reinforcement for the roof from the mouth to the rock. The coal road between the Henry and Prospect was renewed throughout and the old rails replaced with 56 pound rails. A concrete steel bridge was constructed for the Prospect Hillman slope, Plank road crossing.

Inside: An engine and pump were installed in No. 28 slope north of the fault for the extension of operation in No. 28 slope and airway. Preparations were made to construct an intermediate landing in the Red Ash shaft at the Marcy vein level for the haulage concentration

plan. An 8-inch bore hole was completed from the lower Baltimore to the Red Ash vein. A concrete-steel air bridge was built in the Five Foot vein east of No. 14 slope.

Dorrance Colliery

Outside: A new brick garage was completed. New foundations were constructed under the breaker plane and a B. G. Carpenter and Co. dust collector was installed on the east side of the breaker. The 35 x 12 foot Guibal fan was moved from No. 1 shaft to No. 2 shaft, for the purpose of ventilating the upper veins. No. 1 Shaft was concreted to the Rock on north side.

Inside: The concrete and steel roof supports at the Hillman landing were continued and considerable loose rock and old timber were removed. Silting operations were continued in the Hillman West Plane district and diamond drill bore holes to prove the Bennett vein north of the fault were completed. Electric motor haulage was installed in the Red Ash tunnel level district. No. 24 slope in the Red Ash vein was started and No. 13 slope extended. A mule stable was constructed in the Red Ash vein. New engine planes were started in the Hillman, Bowkley and Abbott veins on the east side. Preparations were made to resilt the Baltimore and overlying veins on the east side of the shaft.

Extensive developments were made in the No. 21 slope district in the Hillman vein.

Franklin Colliery

Outside: Extensive repairs were made to the breaker. A series of test holes was made to prove upper veins in the Gin and Brown slope basins. The Bowkley vein upcast shaft was concrete lined.

Inside: A new rock manway was completed from the Bottom Red Ash to the Top Red Ash, near the foot of Rock slope, and No. 25 tunnel from the Top to the Bottom Red Ash vein was completed.

No. 16 Slope in drift, Skidmore vein, was started. The Bottom Five Foot gangways on No. 2 level were cleaned of mud and debris from the Bowkley cave. No. 1 tunnel was cleaned to the Hillman vein. A new hospital has been completed in the drift workings. Silting operations were continued in the Rock slope and Baltimore vein districts. A second opening is being driven for the Snake Island vein to the Hillman level, and a second opening to the drift Skidmore was completed. The pumping plant on the Hillman level was discontinued and the water is now handled directly from the No. 2 level. Preparations were made for reopening Brown slope, to extend No. 21 tunnel to the Hillman vein, and to drive No. 27 tunnel from the Bottom Five Foot to the Hillman vein, and the head of No. 6 Plane level, and also to drive No. 26 tunnel from the Top Red Ash to the Skidmore vein on No. 25 tunnel level.

Warrior Run Colliery

A series of test holes to prove the overylying veins was completed.

A new slope from the surface to the Hillman vein was sunk. Work was started on dismantling the old breaker. Colliery buildings were repainted and the silting of the burning rock bank continued.

DELAWARE AND HUDSON COMPANY

Baltimore No. 5 Colliery

Baltimore No. 2.—No. 8 Plane Ross vein was extended 400 feet.

Baltimore No. 5.—A 16-inch bore hole 750 feet in depth was drilled to the Red Ash vein for pumping.

Two boilers of 250 horse power were added to the steam plant.

Baltimore Tunnel Colliery

A new boiler plant containing 3 boilers of 375 horse power was built to replace the old cylinder boilers near No. 4 shaft.

Conyngham Colliery

An air shaft 25 feet was sunk from the surface to Abbott vein. The Baltimore hoisting shaft was retimbered.

The Baltimore vein sump was enlarged 600 feet in length and a concrete dam built between it and shaft.



EIGHTH DISTRICT

LUZERNE AND LACKAWANNA COUNTIES

Kingston, Pa., February 23, 1910.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor to transmit herewith my annual report as Inspector of Mines for the Eighth Anthracite District for the year ending December 31, 1909.

The report contains the usual tables and statistics, with a brief description of the most important improvements made at the collieries, and also a description of fatal accidents.

Respectfully submitted,

P. M. BOYLE,
Inspector.

SUMMARY OF STATISTICS

Number of collieries,	16
Number of mines,	26
Number of mines in operation,	24
Number of tons of coal shipped to market,	3,168,030
Number of tons used at mines for steam and heat,	432,676
Number of tons sold to local trade and used by employes,	90,968
Number of tons produced,	3,691,674
Number of tons produced by compressed air machines,	.....
Number of tons produced by electrical machines,	.....
Number of persons employed inside of mines,	6,834
Number of persons employed outside,	2,346
Number of fatal accidents inside of mines,	35
Number of fatal accidents outside,	4
Number of non-fatal accidents inside of mines,	74
Number of non-fatal accidents outside,	4
Number of tons of coal produced per fatal accident inside,	105,476
Number of persons employed per fatal accident inside,	195
Number of persons employed per fatal accident outside,	586
Number of persons employed per non-fatal accident inside,	92
Number of persons employed per non-fatal accident outside,	586
Number of wives made widows,	21
Number of children made orphans,	35
Number of steam locomotives used inside of mines,	3
Number of steam locomotives used outside,	10
Number of compressed air locomotives used inside,	4
Number of compressed air locomotives used outside,	.....
Number of electric motors used inside,	25
Number of electric motors used outside,	.....
Number of fans in use,	36
Number of furnaces in use,	.....
Number of gaseous mines in operation,	15
Number of non-gaseous mines in operation,	9
Number of new mines opened,	1
Number of old mines abandoned,	1

TABLE A

PRODUCTION OF COAL

Names of Operators	Tons
Lehigh Valley Coal Company,	1,368,524
Temple Iron Company,	927,179
Kingston Coal Company,	605,594
Plymouth Coal Company,	190,801
East Boston Coal Company,	190,357
Stevens Coal Company,	162,093
Raub Coal Company,	104,395
Clear Spring Coal Company,	86,037
Delaware, Lackawanna and Western Railroad Company,	42,594
Troy Coal Co.,	14,100
Total,	3,691,674

Production by Counties

Luzerne,	3,429,613
Lackawanna,	262,061
Total,	3,691,674

TABLE B.—Fatal and non-fatal accidents inside and outside of mines; number of tons of coal produced per accident; number of persons employed; number employed per accident

Names of Operators	Fatal Accidents			Non-Fatal Accidents			Tons of coal produced per fatal accident inside	Tons of coal produced per non-fatal accident inside	Number of employes inside	Number of employes outside	Total number of employes	Number of employes inside per fatal accident	Number of employes outside per fatal accident	Number of employes inside per non-fatal accident	Number of employes outside per non-fatal accident
	Inside	Outside	Total	Inside	Outside	Total									
Lehigh Valley Coal Co.,	8	2	10	27	1	28	171,065	50,686	2,113	724	2,837	264	362	78	724
Temple Iron Co.,	9	.....	9	11	1	12	103,020	84,289	1,999	475	2,474	222	.....	182	475
Kingston Coal Co.,	9	.....	9	15	2	17	67,288	40,373	1,035	406	1,441	115	.....	69	203
Plymouth Coal Co.,	3	.....	3	9	.....	9	63,600	21,200	305	122	427	102	.....	34	.....
East Boston Coal Co.,	2	1	3	6	.....	6	95,178	31,726	304	180	484	.....	.....	51	.....
Stevens Coal Co.,	1	1	2	.....	.....	.....	162,093	.....	290	116	406	290	.....	.....	.....
Raub Coal Co.,	1	.....	1	2	.....	2	104,395	52,197	302	123	425	302	.....	.....	.....
Clear Spring Coal Co.,	2	.....	2	2	.....	2	43,018	43,018	273	126	399	136	.....	136	.....
Delaware, Lackawanna and Western Railroad Co.,	.....	.....	.....	1	.....	1	.....	42,594	165	54	219	.....	.....	165	.....
Troy Coal Co.,	.....	.....	.....	1	.....	1	.....	14,100	48	20	68	.....	.....	48	.....
Totals and averages for district,	35	4	39	74	4	78	105,476	49,887	6,834	2,346	9,180	195	586	92	586

TABLE C.—Classification of Fatal Accidents Inside and Outside of Mines

	Months													
	January	February	March	April	May	June	July	August	September	October	November	December	Totals	Percentages
Causes of Accidents Inside														
Falls of coal,		1	1		1								3	8.57
Falls of roof,	1	1	1	3	1	3			5	2	2	2	21	60.00
Mine cars,								2		2		1	5	14.29
Explosions of gas,										1			1	2.86
Suffocation by gas, etc.,		2											2	5.71
Miscellaneous,				1			2						3	8.57
Totals,	1	4	2	4	2	3	2	2	5	5	2	3	35	100.00
Causes of Accidents Outside														
Machinery,							1				1		2	50.00
Suffocation in chutes, etc.,												1	1	25.00
Miscellaneous,								1					1	25.00
Totals,							1	1			1	1	4	100.00
Grand totals inside and outside,	1	4	2	4	2	3	3	3	5	5	3	4	39	

TABLE D.—Classification of Non-Fatal Accidents Inside and Outside of Mines

	Months													
	January	February	March	April	May	June	July	August	September	October	November	December	Totals	Percentages
Causes of Accidents Inside														
Falls of coal,			2			2	1					1	6	8.22
Falls of roof,	2			2	2	2			2	2		1	13	17.81
Mine cars,	1	1	5	1	1	4	2	2			1	3	21	28.76
Explosions of gas,			1		2	2							5	6.85
Explosions of powder and dynamite,				1	1		1			1			4	5.48
Blasts, premature and otherwise,		3	2	2			1		2	2		2	14	19.18
Mules,				2		1							3	4.11
Miscellaneous,		1			1	1		2	1			1	7	9.59
Totals,	3	5	10	8	7	12	5	4	5	5	1	8	73	100.00
Causes of Accidents Outside														
Cars,						1							1	20.00
Machinery,		1											1	20.00
Miscellaneous,		1			1	1							3	60.00
Totals,		2			1	2							5	100.00
Grand totals inside and outside,	3	7	10	8	8	14	5	4	5	5	1	8	78	

TABLE E.—Occupations of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Inside													
Miners,		2	1	1		2			3	2	2	1	14
Miners' laborers,	1	1	1	1	2	1			2	1		1	11
Drivers and runners,				2				1				1	4
Doorboys and helpers,								1					1
Pumpmen,							2						2
Timber men,		1											1
Masons,										2			2
Totals,	1	4	2	4	2	3	2	2	5	5	2	3	35
Outside													
Blacksmiths and carpenters,							1						1
Engineers and firemen,								1					1
Slatepickers (boys),											1		1
Laborers,												1	1
Totals,							1	1			1	1	4
Grand totals inside and outside,	1	4	2	4	2	3	3	3	5	5	3	4	39

TABLE F.—Occupations of Persons Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Inside													
Assistant mine foremen,						1							1
Miners,	1	4	4	5	3	4	2	1	3	4		3	33
Miners' laborers,	1		4		2	1	1		2			3	13
Drivers and runners,	1		2	3	1	5		1			1	2	16
Doorboys and helpers,							1					1	2
Timber men,		1						1					2
Machinists,							1						1
Company men,										1			1
Engineers,					1								1
Brakemen,								1					1
Foot tenders,						1			1				2
Totals,	3	5	10	8	7	12	5	4	5	5	1	8	73
Outside													
Blacksmiths and carpenters,		1											1
Engineers and firemen,					1								1
Slatepickers (boys),		1											1
All other employes,						2							2
Totals,		2			1	2							5
Grand totals inside and outside,	3	7	10	8	8	14	5	4	5	5	1	8	78

TABLE G.—Nationality of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
American,				1			1	2		1	1		6
English,							1				2		3
Welsh,							1			1			2
Irish,									1				1
German,								1	1				2
Polish,		1	2		1	1				1		1	7
Hungarian,		2											2
Italian,										1		1	2
Slavonian,				2					2			1	5
Lithuanian,		1		1		2			1	1			6
Austrian,					1								1
Russian,	1											1	2
Totals,	1	4	2	4	2	3	3	3	5	5	3	4	39

TABLE H.—Nationality of Persons Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
American,	1	3	1	1	1	5	1	1	1			2	17
English,				1			1						2
Welsh,			2			1				1			4
Irish,			1		1	1	1						4
German,						1						1	2
Polish,	2	2	2	2	2	1		1	1	1		2	16
Italian,				1								1	2
Slavonian,			1	2		3	1	1	1			1	10
Lithuanian,		2	2	1	2	2	1		1	3	1		15
Austrian,					1			1					2
Russian,			1						1			1	3
Swedish,					1								1
Totals,	3	7	10	8	8	14	5	4	5	5	1	8	78

TABLE I.—Operators and mines, kind of openings, type and size of fans, size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents and number of persons employed inside

Names of Operators and Mines	Kind of opening	Gaseous or non-gaseous	Method of ventilation	Diameter of fan in feet and inches	Width of blades in feet and inches	Depth of blades in feet and inches	Number of revolutions per minute	Water gauge developed—in inches	Name of fan	Power used	Number of splits of air currents	Number of cubic feet of air per minute entering the mine at inlet	Total quantity of air per minute circulating in all the splits in cubic feet	Number of cubic feet per minute passing out at outlet	Number of persons employed inside
Lehigh Valley Coal Co.															
Exeter Colliery:															
Number 2 Shaft,	Shaft,	Gaseous,	2 Fans,	20 20	6.8 6.8	5.10 5.10	76 76	1.5 1.5	Guibal,	Steam,	10	219,505	135,308	251,520	378
Number 1 Shaft (Pittston-Checker),	Shaft,	Gaseous,	Fan,	20	6.11	6.7	60	1.5	Guibal,	Steam,	9	206,104	164,992	232,647	238
Knight Shaft, Second opening,*	Shaft,	Gaseous,	Fan,	20	5.11	5.11	60	1.5	Guibal,	Steam,					
Maltby Colliery:															
Number 1 Shaft,	Shaft,	Gaseous,	2 Fans,	25 20	8.11 5.11	6.10 5.8	72 82	3.0 2.5	Guibal,	Steam,	10	158,632	123,852	186,932	430
Mountain Tunnel,	Tunnel,	Non-gas.,	Fan,	6	1.6	1.4	180	0.5	Guibal,	Steam,	3	41,252	22,530	43,670	26
Four Foot Slope,	Slope,	Non-gas.,	Fan,	12	4.0	4.0	82	0.5	Guibal,	Steam,	2	60,347	45,070	66,335	4
Seneca Colliery:															
Twin Shaft,	Shaft,	Gaseous,	Fan,	20	6.0	6.0	78	1.7	Guibal,	Steam,	6	91,000	77,000	120,000	158
Coxey Shaft,*	Shaft,	Gaseous,	Fan,	20	6.0	6.0	78	1.2	Guibal,	Steam,	5	92,800	68,300	99,000	156
Pittston Shaft,	Shaft,	Gaseous,	Fan,	20	6.0	6.0	40	0.4	Guibal,	Steam,	1	38,100	18,900	39,200	35
William A. Colliery:															
William A. Shaft,	Shaft,	Non-gas.,	Fan,	18	4.10	5.2	75	0.7	Guibal,	Steam,	4	73,320	60,120	74,400	110
Lawrence Shaft,*	Shaft,	Non-gas.,	Fan,	18	5.0	5.0	75	0.8	Guibal,	Steam,	3	37,600	20,000	37,800	94
Babylon Drift,*	Slope,	Non-gas.,	Fan,	12	4.0	4.0	75	0.2	Guibal,	Steam,	2	22,700	15,000	23,000	44
Babylon Shaft,*	Shaft,	Non-gas.,	Fan,	20	5.25	5.75	75	1.3	Guibal,	Steam,	3	91,020	78,940	96,025	141
Number 10 Tunnel,	Tunnel,	Non-gas.,	Fan,	6	3.0	1.5	180	0.3	Guibal,	Steam,	2	18,200	16,400	18,600	49
Westmoreland Colliery:															
Number 1 Tunnel,	Tunnel,	Gaseous,	Fan,	16	4.10	3.0	75	0.5	Guibal,	Steam,	4	110,000	93,000	120,000	250

*Abandoned.

Temple Iron Co.																
Harry E. Colliery:																
Number 1 Shaft,	Shaft,	--	Gaseous,	2 Fans,	25 15	8.0 4.5	6.83 4.5	75 90	2.5 0.6	Guibal,	Steam,	10	227,700	216,900	228,200	571
Mt. Lookout Colliery:																
Number 1 Shaft,	Shaft,	--	Gaseous,	2 Fans,	20	7.0	6.83	80	2.0	Guibal,	Steam,	9	134,000	123,000	147,000	405
Forty Fort Colliery:					20	6.25	5.33	82	2.0							
Number 1 Shaft,	Shaft,	--	Gaseous,	Fan,	20	7.0	6.66	85	2.3	Guibal,	Steam,	8	157,600	132,200	160,600	441
Kingston Coal Co.																
Kingston 4 Colliery:																
Number 1 Shaft,	Shaft,	--	Gaseous,	2 Fans,	25 20	8.0 5.0	6.0 5.0	78 84	2.0 1.8	Guibal,	Steam,	8	198,335	166,340	221,810	546
Number 4 Shaft,	Shaft,	--	Gaseous,	2 Fans,	25 25	8.0 8.0	8.0 8.0	78 78	2.0 2.0	Guibal,	Steam,	8	136,000	119,000	149,000	489
Plymouth Coal Co.																
Black Diamond Colliery:																
Number 1 Shaft,	Shaft,	--	Gaseous,	Fan,	20	6.0	6.5	90	1.9	Vulcan,	Steam,	5	125,000	75,000	130,000	305
East Boston Coal Co.																
East Boston Colliery:																
Number 1 Shaft,	Shaft,	--	Gaseous,	Fan,	25	7.0	7.0	78	2.7	Guibal,	Steam,	7	160,500	119,600	162,500	294
Stevens Coal Co.																
Stevens Colliery:																
Number 1 Shaft,*	Shaft,	--	Gaseous,	Fan,	20	6.0	7.0	70	1.0	Guibal,	Steam,	4	97,950	91,900	100,300	156
Number 2 Shaft,	Shaft,	--	Gaseous,	Fan,	20	5.0	6.0	64	1.0	Guibal,	Steam,	4	88,190	77,280	91,250	132
Raub Coal Co.																
Louise Colliery:																
Mt. Thomas Tunnel,	Tunnel,	-	Non-gas.,	Fan,	13	5.0	5.0	120	0.8	Guibal,	Steam,	2	31,000	31,000	35,000	110
Klondike Tunnel,	Tunnel,	-	Non-gas.,	Natural,	-	------	------	------	------	------	------	2	35,000	27,500	37,000	70
Waddells Shaft,	Shaft,	--	Non-gas.,	Natural,	-	------	------	------	------	------	------	3	52,000	47,000	53,000	82
Sand Slope,	Slope,	---	Non-gas.,	Natural,	-	------	------	------	------	------	------	----	----------	----------	----------	------
Clear Spring Coal Co.																
Clear Spring Colliery,																
Number 1 Shaft,	Shaft,	--	Gaseous,	2 Fans,	24 20	8.0 6.0	6.0 6.0	60 60	2.5 1.0	Guibal,	Steam,	3	250,000	220,000	256,000	273
Delaware, Lackawanna and Western Railroad Co.																
Pettebone Colliery:																
Number 1 Shaft,	Shaft,	--	Gaseous,	Fan,	22	6.2	6.0	120	1.7	Dickson,	Steam,	9	124,100	100,400	142,600	105
Number 2 Shaft,	Shaft,	--	Gaseous,	Fan,	35	10.1	9.1	52	2.3							
Troy Coal Co.																
Troy Colliery:																
Number 1 Tunnel,	Tunnel,	-	Non-gas.,	Fan,	16	4.0	4.0	52	0.5	Guibal,	Steam,	2	32,000	27,000	38,000	48

*Abandoned.

Mines marked abandoned are used for ventilation and emergency purposes only. No coal is hoisted from them.

TABLE 1.—Operators, location of collieries, railroads, etc.

Names of Operators and Collieries	County	Name of General Superintendent	Post Office	Name of Superintendent	Post Office	Railroad to Mine
Lehigh Valley Coal Co.						
Exeter,	Luzerne,	S. D. Warriner,	Wilkes-Barre,	Thomas Thomas,	Wilkes-Barre,	Lehigh Valley.
Maltby,	Luzerne,			Thomas Thomas,	Wilkes Barre,	
Seneca,	Luzerne,			W. D. Owens,	Pittston,	
William A,	Lackawanna,			W. D. Owens,	Pittston,	
Westmoreland,	Luzerne,			Thomas Thomas,	Wilkes-Barre,	
Lawrence Washery,	Lackawanna,			W. D. Owens,	Pittston,	
Temple Iron Co.						
Harry E.	Luzerne,	F. H. Hemelright,	Scranton,	J. J. McCarthy,	Luzerne,	Lehigh Valley.
Mt. Lookout,				Seward Button,	Wyoming,	Lehigh Valley and D. L. and W.
Forty Fort,				J. J. McCarthy,	Luzerne,	Lehigh Valley.
Kingston Coal Co.						
Kingston No. 4,	Luzerne,	F. E. Zerbey,	Wilkes-Barre,	T. H. Williams,	Edwardsville,	D. L. and W. and D. and H.
Plymouth Coal Co.						
Black Diamond,	Luzerne,	G. S. Jones,	Luzerne,	G. S. Jones,	Luzerne,	Lehigh Valley and D. L. and W.
East Boston Coal Co.						
East Boston,	Luzerne,	W. T. Payne,	Kingston,	A. T. Bredbenner,	Dorranceton,	Lehigh Valley and D. L. and W.
Stevens Coal Co.						
Stevens,	Luzerne,	H. W. Kingsbury,	Scranton,	D. W. Evans,	Pittston,	Lehigh Valley.
Raub Coal Co.						
Louise,	Luzerne,	George Steel,	Pittston,	George Steel,	Pittston,	Lehigh Valley.
Clear Spring Coal Co.						
Clear Spring,	Luzerne,	J. L. Cake,	Pittston,	J. P. Cake,	Pittston,	D. L. and W.
Delaware, Lackawanna and Western Railroad Co.						
Pettebone,	Luzerne,	R. A. Phillips,	Scranton,	H. G. Davis,	Kingston,	D. L. and W.
Troy Coal Co.						
Troy,	Luzerne,	M. J. Healey,	Plains,	Mathew Farrel,	Wyoming,	Lehigh Valley.

TABLE 2.—Number of tons of coal mined, number of days worked, number of persons employed, number killed and injured, quantity of powder, dynamite and so-called safety explosives used, etc.

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Explosives: Number of pounds of powder used	Explosives: Number of pounds of dynamite used	Number of horses and mules
Lehigh Valley Coal Co.												
Exeter,	Luzerne,	390,813	28,290	7,624	426,727	226	788	4	4	203,650	211,300	118
Maltby,	Luzerne,	265,081	32,484	4,377	301,942	222	604	----	7	384,025	139,419	91
Seneca,	Luzerne,	172,205	33,971	2,927	209,103	230	499	4	9	285,175	18,545	86
William A.,	Lackawanna,	180,571	23,956	2,850	207,377	215	598	1	4	228,600	18,950	88
Westmoreland,	Luzerne,	149,834	16,376	2,481	168,691	201	330	1	4	92,250	127,263	41
Lawrence Washery,	Lackawanna,	54,358	326	----------	54,684	184	18	----	----	----------	----------	----
Totals,		1,212,862	135,403	20,259	1,368,524	------	2,837	10	28	1,093,725	515,477	424
Temple Iron Co.												
Harry E.,	Luzerne,	273,916	54,413	3,478	331,807	229	846	2	2	280,200	70,525	93
Mt. Lookout,	Luzerne,	262,957	36,500	4,566	304,023	251	821	4	5	270,300	122,057	51
Forty Fort,	Luzerne,	261,265	27,509	2,575	291,349	217	807	3	5	273,000	80,881	89
Totals,		798,138	118,422	10,619	927,179	------	2,474	9	12	823,500	253,163	233
Kingston Coal Co.												
Kingston No. 4,	Luzerne,	553,429	44,750	7,415	605,594	237	1,441	9	17	534,200	7,425	149
Plymouth Coal Co.												
Black Diamond,	Luzerne,	149,888	14,500	3,913	168,301	250	427	3	9	52,500	18,400	54
Black Diamond Washery,	Luzerne,	----------	22,500	----------	22,500	------	----------	----	----	----------	----------	----
Totals,		149,888	37,000	3,913	190,801	------	427	3	9	52,500	18,400	54

TABLE 2—Continued

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Explosives: Number of pounds of powder used	Explosives: Number of pounds of dynamite used	Number of horses and mules
East Boston Coal Co.												
East Boston,	Luzerne,	124,053	28,000	4,922	156,975	177	453	3	6	98,125	21,450	58
East Boston Washery,		28,445	3,600	1,337	33,382	298	31					
Totals,		152,498	31,600	6,259	190,357		484	3	6	98,125	21,450	58
Stevens Coal Co.												
Stevens,	Luzerne,	130,442	23,500	8,151	162,093	250	406	2		82,500	134,875	51
Raub Coal Co.												
Louise,	Luzerne,	76,618	16,425	11,352	104,395	157	425	1	2	110,625	23,875	35
Clear Spring Coal Co.												
Clear Spring,	Luzerne,	47,181	10,000	10,379	67,560	87	376	2	2	83,334	16,966	61
Clear Spring Washery,		8,539		9,938	18,477	241	23					
Totals,		55,720	10,000	20,317	86,037		399	2	2	83,334	16,966	61
Delaware, Lackawanna and Western Railroad Co.												
Pettebone,	Luzerne,	27,635	12,576	2,383	42,594	33	219		1	1,609	7,218	24
Troy Coal Co.												
Troy,	Luzerne,	10,800	3,000	300	14,100	225	68		1	14,000	1,250	7
Grand totals,		3,168,030	432,676	90,968	3,691,674		9,180	39	78	2,903,118	1,000,099	1,096

TABLE 2.—Part 2.

Names of Operators	County	Number of Boilers					Locomotives			Number of steam engines of all classes	Total horse power	Number of pumps delivering water to surface	Capacity in gallons per minute	Quantity delivered to surface per minute—gallons	Number of electric dynamos	Number of air compressors
		Cylindrical	Horse power	Tubular	Horse power	Total horse power	Steam	Air	Electric							
Lehigh Valley Coal Co.,	Luzerne, Lackawanna,	----	----	44	8,950	8,950	6	4	9	114	8,325	30	19,925	15,780	6	4
Temple Iron Co.,		----	----	25	6,655	6,655	2	----	8	72	4,900	10	12,850	5,500	3	5
Kingston Coal Co.,		----	----	15	3,900	3,900	1	----	4	26	4,200	7	8,600	4,400	3	2
Plymouth Coal Co.,		----	----	20	3,118	3,118	1	----	----	42	2,065	3	5,400	3,750	1	2
East Boston Coal Co.,		----	----	11	1,810	1,810	----	----	----	29	1,348	2	5,000	3,200	2	2
Stevens Coal Co.,	Luzerne,	----	----	9	1,475	1,475	1	----	1	22	1,483	5	4,300	2,750	1	1
Raub Coal Co.,		----	----	5	860	860	2	----	----	24	1,560	2	7,560	450	----	----
Clear Spring Coal Co.,		----	----	12	2,042	2,042	----	----	2	7	650	6	5,000	5,000	1	----
Delaware, Lackawanna and Western Railroad Co.,		----	----	8	1,080	1,080	----	----	1	26	2,716	2	160	160	1	----
Troy Coal Co.,		----	----	5	400	400	----	----	----	3	185	2	200	180	----	1
Totals,		----	----	154	30,290	30,290	13	4	25	365	27,432	69	68,935	41,170	18	17

TABLE 3.—Number of each class of employes inside and outside of mines

Names of Operators	County	Inside											Outside									Grand total inside and outside
		Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Doorboys and helpers	Pumpmen	Company men	All other employes	Total inside	Superintendents	Foremen	Blacksmiths and carpenters	Engineers and firemen	Slate pickers (boys)	Slate pickers (men)	Bookkeepers and clerks	All other employes	Total outside	
Lehigh Valley Coal Co.,	Luzerne, Lackawanna,	8	25	----	985	433	280	25	44	127	186	2,113	1	5	67	84	82	26	16	443	724	2,837
Temple Iron Co.,		4	3	14	897	402	185	98	28	112	196	1,909	3	3	36	55	126	44	7	201	475	2,474
Kingston Coal Co.,		2	5	10	450	205	179	14	17	12	141	1,035	1	1	25	37	39	43	3	257	406	1,441
Plymouth Coal Co.,		1	1	4	98	57	34	11	5	75	19	305	----	1	6	19	22	14	2	58	122	427
East Boston Coal Co.,		1	2	3	80	52	56	9	8	70	23	304	1	3	8	15	49	14	5	85	180	484
Stevens Coal Co.,	Luzerne,	2	----	2	121	87	44	4	6	10	14	290	1	1	5	14	35	2	3	55	116	406
Raub Coal Co.,		1	3	1	148	49	44	8	5	14	29	302	----	1	8	14	47	6	3	44	123	425
Clear Spring Coal Co.,		1	2	3	72	42	23	8	5	117	------	273	1	2	6	20	16	10	4	67	126	399
Delaware, Lackawanna and Western Railroad Co.,		1	----	2	41	44	9	3	1	4	60	165	----	1	4	13	11	4	1	20	54	219
Troy Coal Co.,		1	----	----	18	18	5	------	2	4	------	48	1	1	2	4	8	2	1	1	20	68
Totals,		22	41	39	2,910	1,449	859	180	121	545	668	6,834	9	19	167	275	435	165	45	1,231	2,346	9,180

TABLE 3 —Part 2

Names of Operators	County	Average Number of Days Worked in Breaker												
		January	February	March	April	May	June	July	August	September	October	November	December	Total
Lehigh Valley Coal Co.,	Lackawanna, Luzerne,	18	14	21	18	22	22	16	16	12	18	21	21	219
Temple Iron Co.,	Luzerne,	19	14	22	20	23	23	18	17	16	17	21	22	232
Kingston Coal Co.,		21	16	25	23	22	20	14	12	15	23	22	24	237
Plymouth Coal Co.,		21	17	24	20	19	22	22	21	20	21	21	22	250
East Boston Coal Co.,		18	16	16	14	13	14	13	16	10	16	12	19	177
Stevens Coal Co.,		23	20	25	19	10	24	21	22	23	22	19	22	250
Raub Coal Co.,		12	12	15	10	12	12	13	13	9	14	17	18	157
Clear Spring Coal Co.,		17	14	22	4	------	------	------	------	------	------	14	16	87
Delaware, Lackawanna and Western Railroad Co.,		5	3	6	4	5	4	3	3	------	------	------	------	33
Troy Coal Co.,		16	14	18	24	25	23	20	------	25	24	21	15	225

TABLE 4.—Fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Colliery	County	Nature and Cause of Accident in Brief
Jan. 25	John Lakala,	Russian,	Laborer,	28	M.	1		Kingston No. 4,		Killed by a fall of rock in the face of his working place in the Orchard vein.
Feb. 6	Frank Kuser,	Polish,	Miner,	43	M.	1	3	Mt. Lookout,		Killed by fall of top rock in the face of his chamber in top Ross vein.
11	Nicholas Nickatenis,	Hungarian,	Timberman,	36	M.	1	4	Black Diamond,		Suffocated by smoke in the Red Ash vein, caused by the Emergency Hospital getting on fire.
11	Steve Petka,	Hungarian,	Laborer,	22	S.			Black Diamond,		Suffocated by smoke in the Red Ash vein, caused by the Emergency Hospital getting on fire.
15	Joseph Seceski,	Lithuanian,	Miner,	32	M.	1	1	Kingston No. 4,		Killed by fall of coal in No. 5 lift, Red Ash vein, while knocking out a set of timbers.
March 21	Edward Sukwoh,	Polish,	Laborer,	19	S.			Forty Fort,		Killed by fall of rock in his working place in bottom of Ross slope.
27	Stanley Vitscofski,	Polish,	Miner,	40	M.	1	5	Kingston No. 4,	Luzerne,	Killed by fall of coal in the face of No. 1 West, No. 3 Red Ash slope.
April 14	Peter Hoosick,	Slavonian,	Miner,	35	M.	1	4	Forty Fort,		Fatally injured by fall of rock in the face of his gangway on Road 18, 11 Foot vein.
23	Enock Joniskie,	American,	Runner,	25	S.			Seneca,		Fatally injured by fall of rock on Road 105-A, Main gangway, Pittston vein.
24	Joseph Wallace,	Lithuanian,	Laborer,	18	S.			Forty Fort,		Killed by fall of rock in the face of his working place, Road 18, Eleven Foot vein.
26	Henry Bewosky,	Slavonian,	Driver,	19	S.			Harry E,		Fatally injured by a nail puncture in his foot. He jumped off a pile of gob onto a plank with a spike sticking up.
May 10	John Glentock,	Polish,	Laborer,	23	M.	1	2	Seneca,		Fatally injured by fall of top rock in the face of his chamber in the No. 5 vein.

May	19	Rudolph Rodda,	Austrian,	Laborer,	43	M.	1		Black Diamond,		Fatally injured by fall of top coal in the face of his working place in Red Ash vein.
June	18	Joe Pechulis,	Lithuanian,	Miner,	35	M.	1		East Boston,		Instantly killed by fall of top rock in the face of his gangway, 11-Foot vein.
		August Wylonis,	Lithuanian,	Laborer,	26	S.			East Boston,		Fatally injured by fall of top rock in face of gangway, 11-Foot vein.
	22	Frank Shepenskie,	Polish,	Miner,	35	M.	1	3	Westmoreland,		Instantly killed by fall of top rock in the face of his chamber, Pittston vein.
July	6	George Underwood,	English,	Pump runner,	42	M.	1	1	Clear Spring,		Instantly killed by being scalded by steam, caused by the bursting of steam pipe in Marcy vein.
		James W. Williams,	Welsh,	Pump runner,	41	M.	1	2	Clear Spring,		Fatally injured by being scalded with steam, caused by the bursting of a steam pipe in Marcy vein.
	20	Harry Prutzman,	American,	Carpenter,	32	S.			Seneca,		Fatally injured by being caught in revolving shaft in the breaker, while reaching for hammer.
Aug.	11	Ralph Polen,	American,	Engineer,	25	M.	1	1	Exeter,		Instantly killed by the bursting of an air compressor pipe. Outside
	17	Theodore Tauber,	American,	Door tender,	16	S.			Mt. Lookout,		Fatally injured by falling under an electric motor, in Bottom Ross vein on main gangway.
	19	Mike Wazel,	German,	Driver,	19	S.			Louise,		Fatally injured by cars, which squeezed him between car and rib of gangway, Top Ross vein.
Sept.	13	Owen Gallagher,	Irish,	Laborer,	48	M.	1		Mt. Lookout,	Luzerne,	Fatally injured by being struck on head by a piece of rock on gangway in the Top Ross vein.
	16	Joseph Redonchi,	Slavonian,	Laborer,	22	S.			Kingston No. 4,		Instantly killed by fall of top rock in the face of his working place, in Ross vein.
	18	Charles Dorack,	Lithuanian,	Miner,	31	M.	1		Kingston No. 4,		Instantly killed by fall of top rock in the face of his chamber, in Checker vein.
	23	Frank Demosky,	German,	Miner,	56	M.	1	2	Kingston No. 4,		Instantly killed by fall of top rock in face of his chamber, in Ross vein.
	27	Joseph Sholits,	Slavonian,	Miner,	25	M.	1	3	Mt. Lookout,		Fatally injured by fall of top rock in face of his chamber, Top Ross vein.
Oct.	8	Lewis Bancony,	Italian,	Miner,	33	S.			Seneca,		Fatally injured by an explosion of gas in an abandoned gangway, in Top Marcy vein.
	12	Charles Degus,	Lithuanian,	Miner,	33	S.			Kingston No. 4,		Fatally injured by fall of rock in the face of his chamber, in No. 1 Ross vein.
	14	James Thomas,	Welsh,	Mason,	58	S.			Exeter,		Instantly killed by cars on stable road, in Red Ash vein.
		Joseph Stackhouse,	American,	Mason,	64	M.	1		Exeter,		Instantly killed by cars on stable road in Red Ash vein.
	18	Waysick Matoskie,	Polish,	Laborer,	28	S.			Kingston No. 4,		Fatally injured by fall of rock in face of his working place, in Orchard vein.

TABLE 4—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Colliery	County	Nature and Cause of Accident in Brief
Nov. 3	Joseph Morelock,	English,	Slate picker,	14	S.			Stevens,	Luzerne,	Fatally injured by being caught in a revolving shaft pulley in the breaker.
6	John Galets,	American,	Miner,	39	M.	1		William A,	Lackawanna,	Fatally injured by fall of rock in the face of his working place, middle split, Red Ash vein.
13	James L. Scott,	English,	Miner,	39	M.	1	2	Kingston No. 4,		Instantly killed by fall of top rock in the face of his working place in Orchard vein.
Dec. 17	Peter Slyer,	Polish,	Driver,	18	S.			Stevens,		Fatally injured by being caught between cars in the 5th vein.
18	Lewis Simonesky,	Russian,	Laborer,	20	S.			East Boston,	Luzerne,	Smothered by a rush of culm on culm dump. Outside.
20	Monella Pelligrine,	Italian,	Miner,	29	M.	1	2	Exeter,		Fatally injured by fall of top rock, in the face of his chamber, in Red Ash vein.
28	John Matchic,	Slavonian,	Laborer,	23	S.			Harry E.		Instantly killed by fall of top rock in the face of his working place, in Red Ash vein.

TABLE 5.—Non-fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Colliery	County	Nature and Cause of Accident in Brief
Jan. 20	Stanley Demerick,	Polish,	Laborer,	38	M.	Mt. Lookout,		Head severely injured and leg broken by fall of rock in face of his working place.
25	Stanley Comago,	Polish,	Miner,	24	S.	Kingston No. 4,		Right leg broken below the knee by fall of rock in face of his chamber.
26	John Shannock,	American,	Driver,	17	S.	Maltby,		Left leg broken by car jumping the track and striking him.
Feb. 4	Andrew Brozas,	Lithuanian,	Miner,	27	S.	Kingston No. 4,		Forehead, nose and eye cut by flying piece of coal from blast in face of his chamber.
11	Herbert Keiper,	American,	Blacksmith,	31	M.	Maltby,		Two teeth knocked out and jaw bone broken by being struck by a piece of iron. Outside.
11	William Fister,	American,	Timberman,	38	M.	Black Diamond,		Overcome by wood smoke caused by fire in hospital.
12	Frank Kozlowski,	Polish,	Miner,	40	S.	East Boston,	Luzerne,	Head and face cut and bruised about shoulders by premature blast in face of his chamber.
18	John Richards,	American,	Slate picker,	16	S.	Mt. Lookout,		Jaw bone broken by being struck by lever of jig engine in the breaker. Outside.
18	Charles Sereskie,	Lithuanian,	Miner,	38	M.	Mt. Lookout,		Leg broken by being struck by flying coal from blast in the face of his chamber.
26	Peter Grousas,	Polish,	Miner,	26	S.	Clear Spring,		Compound fracture of right leg below the knee by being bumped by cars in No. 5 West Marcy vein.
March 4	Thomas Duropski,	Slavonian,	Laborer,	21	S.	Black Diamond,		Leg broken by cars in face of his chamber.
4	Steve Misceavitch,	Polish,	Laborer,	23	M.	Kingston No. 4,		Cut on head by a piece of coal from blast striking him.
15	Joseph Strasko,	Lithuanian,	Miner,	34	M.	Forty Fort,		Body bruised by piece of coal from blast striking him in face of his chamber.
15	William Jones,	Welsh,	Miner,	42	M.	Kingston No. 4,		Face cut and two ribs broken by being squeezed by cars in Bennett vein.

TABLE 5.—Non-fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Colliery	County	Nature and Cause of Accident in Brief
March 16	Michael Price,	Irish,	Laborer,	45	M.	Kingston No. 4,		Bruised about the back and hips by car that jumped the track in No. 2 Red Ash slope.
	John Dedallis,	Lithuanian,	Laborer,	26	M.	Black Diamond,		Leg broken by fall of top coal in face of working place.
19	William King,	American,	Runner,	18	S.	East Boston,		Face and hands cut by being squeezed between cars in the 11 Foot vein.
20	James Thomas,	Welsh,	Miner,	57	S.	Exeter,	Luzerne,	Face and hands slightly burned by an explosion of gas in the face of his chamber.
26	Anthony Inotski,	Polish,	Miner,	50	M.	East Boston,		Hands badly smashed by piece of coal falling on him in face of his chamber.
29	Anthony Novich,	Russian,	Driver,	26	S.	Seneca,		Collar bone and one rib broken by being bumped by cars in Marcy vein.
April 5	James Donnelly,	American,	Miner,	36	S.	Troy,		Rib broken by piece of rock falling on him in face of his place.
14	George Gukoski,	Polish,	Miner,	34	M.	Louise,		Body seriously cut and bruised by premature blast in his place.
15	John Kulas,	Polish,	Miner,	38	M.	Seneca,		Hands and face burned by cartridge of powder which he ignited in face of his place.
16	John Moro,	Italian,	Miner,	33	M.	William A.,	Lackawanna,	Face and head cut and bruised by flying coal from blast in face of his chamber.
22	John Radsville,	Lithuanian,	Miner,	33	M.	Seneca,		Head and hands badly cut by piece of rock falling on him in face of his place.
	William Brisler,	English,	Driver,	17	S.	Kingston No. 4,		Left leg fractured below the knee by being squeezed between car and rib.
26	Andrew Zelleppa,	Slavonian,	Driver,	19	S.	Exeter,	Luzerne,	Head cut by kick of mule in Red Ash vein.
27	Stanley Covinskie,	Slavonian,	Driver,	18	S.	Maltby,		Back seriously injured between mule and car in breast.
May 1	Paul Kaletskie,	Polish,	Driver,	18	S.	East Boston,		Leg broken by cars that broke loose on Lance slope.

May	7	John T. Lynn,	Swedish,	Engineer,	20	S.	Kingston No. 4,			Left arm fractured by falling from an electric wire pole. Outside.
	10	Anthony Chapla,	Lithuanian,	Miner,	28	S.	Kingston No. 4,			Burned by an explosion of powder when keg came in contact with electric wire.
	11	Thomas Loughney,	Irish,	Miner,	35	S.	Seneca,			Both legs broken and head cut by fall of rock in face of his chamber.
	11	Andrew Marscavage,	Lithuanian,	Laborer,	35	M.	Seneca,			Hands and face burned by an explosion of gas in face of his chamber.
	13	Jacke Giesinaer,	American,	Engineer,	45	M.	Seneca,			Toe broken while at work replacing rope in Pittston vein.
	14	Martin Chepela,	Polish,	Miner,	32	M.	Forty Fort,			Two fingers smashed and head cut by fall of rock in the face of chamber.
	14	Peter Riblan,	Austrian,	Laborer,	21	S.	East Boston,	Luzerne,		Burned by gas in face of Lance vein slope gangway.
June	3	Charles Smehavage,	Polish,	Driver,	19	S.	Westmoreland,			Leg broken by being struck by car, Pittston vein.
	4	Anthony Jones,	Welsh,	Assistant foreman,	40	M.	Kingston No. 4,			Face and hands burned by an explosion of gas in Orchard vein.
	9	John Cranesky,	Lithuanian,	Laborer,	30	S.	Maltby,			Arm crushed by fall of coal at face of breast.
	10	Robert Nesbitt,	American,	Laborer,	22	M.	Westmoreland,			Leg and hip bruised by falling from loaded track to empty track, a distance of 12 feet. Outside.
	11	Charles Wallace,	American,	Laborer,	44	M.	Kingston No. 4,			Bruised about hip and right leg caused by cars. Outside.
	12	William White,	Lithuanian,	Miner,	25	S.	Kingston No. 4,			Burned by gas about face, hands and back in face of his chamber.
	15	John Clark,	Irish,	Driver,	18	S.	William A.,	Lackawanna,		Collar bone fractured by falling from a mule in the Clark vein.
	21	Frank Syrue,	American,	Driver,	19	S.	Westmoreland,			Dislocated ankle by slipping on the road while trying to capture his mule, Marcy vein.
	21	George Dobria,	Slavonian,	Runner,	18	S.	Maltby,	Luzerne,		Seriously squeezed about the leg and hip, being bumped between cars, Marcy vein.
	22	Peter Rholand,	German,	Miner,	35	M.	William A.,	Lackawanna,		Injured about the back by a fall of rock in the face of his chamber.
	23	Frank Kozlowski,	Slavonian,	Miner,	40	M.	Black Diamond,			Leg broken by fall of coal in face of his chamber.
	24	Harrison Litts,	American,	Foot tender,	20	S.	Pettebone,			Two fingers seriously smashed by car running over them, No. 1 Shaft.
	25	Andrew Jobick,	Slavonian,	Miner,	30	M.	Mt. Lookout,			Hip and ankle badly injured by fall of rock in face of his chamber.
	29	William Finnan,	American,	Runner,	19	S.	Seneca,	Luzerne,		Foot seriously crushed by being caught between bumpers of cars on gangway.
July	1	Richard Tolin,	Irish,	Door tender,	17	S.	Kingston No. 4,			Cut on face and head and bruised about the body by cars on gangway.
	2	Stanley Martin,	American,	Machinist,	19	S.	Kingston No. 4,			Nose fractured and cheek bone broken by being squeezed between car and door, Ross vein.

TABLE 5—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Colliery	County	Nature and Cause of Accident in Brief
July 3	Peter Butkie,	Lithuanian,	Miner,	26	M.	Harry E,		Right hand blown off, also seriously cut on face by a premature blast, 11 Foot vein.
15	Henry Conyard,	English,	Miner,	40	M.	Mt. Lookout,		Bone in foot broken by stepping on a percussion cap, in face of his chamber.
17	John Benish,	Slavonian,	Laborer,	24	S.	Black Diamond,		Leg broken and head badly cut by fall of coal in face of his working place.
Aug. 8	Mick Redonovitch,	Austrian,	Timberman,	40	M.	Black Diamond,		Small bone of his leg fractured by piece of timber falling on him.
12	Thomas Gaughin,	American,	Driver,	17	S.	Westmoreland,		Dislocated ankle by slope rope striking him while hoisting from the Pittston vein.
17	Andrew Sadoroski,	Polish,	Miner,	45	M.	Black Diamond,	Luzerne,	Contusion of the shoulder and back and rib fractured by cars squeezing him, Red Ash vein.
25	George Snee,	Slavonian,	Brakeman,	25	M.	Kingston No. 4,		Right leg broken below the knee by being squeezed between car and motor, Red Ash vein.
Sept. 1	August Ambroski,	Russian,	Miner,	33	S.	Black Diamond,		Seriously cut about the face and arms by premature blast in face of his chamber.
10	Charles Dagus,	Lithuanian,	Miner,	33	S.	Kingston No. 4,		Badly cut about the head and body by premature blast in the face of his chamber.
15	Stephen Buzinski,	Polish,	Laborer,	23	M.	William A.,	Lackawanna,	Bruised on the back and cut on the face by fall of top rock in face of his place.
20	Epriam Hatten,	American,	Foot tender,	30	M.	Maltby,		Shoulder blade broken by piece of coal falling down the shaft on him.
28	Andrew Blaumer,	Slavonian,	Laborer,	32	M.	East Boston,		Both legs broken by fall of top rock while making a hitch to set timber, 4 Foot vein.
Oct. 5	William Lewis,	Welsh,	Company man,	42	M.	Kingston No. 4,	Luzerne,	Injured by fall of rock in gangway.
8	Anthony Gibbison,	Lithuanian,	Miner,	28	M.	Louise,		Knee cap injured by fall of rock in the face of his gangway.

Oct.	16	Peter Verasky,	Lithuanian,	Miner,	36	M.	Kingston No. 4,			Arm broken, ribs fractured and body cut by a blast, Orchard vein.
	18	John Zelevues,	Lithuanian,	Miner,	25	M.	Maltby,			Seriously lacerated about the face and body by flying pieces of coal from a blast in the face of his chamber.
	28	Roderick Skiwiskie,	Polish,	Miner,	40	S.	Exeter,			Face burned by powder ignited in a keg by lighted squib.
Nov.	19	Charles Paskoskie,	Lithuanian,	Runner,	21	S.	Seneca,			Cut and bruised about the head and body by being struck by mine car in gangway.
Dec.	2	Floyd Sisco,	American,	Runner,	18	S.	Forty Fort,			Thumb smashed by being caught in car wheel, 11 Foot vein.
	3	John Clifford,	American,	Driver,	30	S.	Exeter,	Luzerne,		Left leg cut by being caught by car in gangway.
	4	John Besack,	Russian,	Laborer,	27	M.	Black Diamond,			Small bone of right leg broken by a prop falling on him. Red Ash vein.
	7	Frank Korage,	Italian,	Laborer,	44	S.	Forty Fort,			Leg bruised by flying pieces of coal from a blast, Ross vein.
	11	Jacob Simonhour,	German,	Door tender,	18	S.	Forty Fort,			Left knee dislocated by a car jumping on the wrong track, Ross vein.
	27	Anthony Galatis,	Polish,	Miner,	40	M.	Clear Spring,			Leg fractured above the knee by fall of coal, Checker vein.
	28	Charles Badzeck,	Slavonian,	Miner,	28	M.	Harry E.,			Head and back cut and four toes cut off left foot by fall of rock in the face of his chamber.
	30	Joseph Seritza,	Polish,	Miner,	33	S.	Seneca,			Jaw injured while firing blast, 6th vein.

CONDITION OF COLLIERIES

LEHIGH VALLEY COAL COMPANY

Maltby.—Ventilation, drainage and condition as to safety, good.

Exeter.—Ventilation, drainage and general conditions good.

Westmoreland.—Ventilation fair, drainage and general conditions as to safety, good.

Seneca.—Ventilation, drainage and condition as to safety, good.

William A.—Ventilation good; drainage and general condition fair. The principal work done at these mines is robbing pillars and are about as safe as it is possible to make them under the condi[illegible]

TEMPLE IRON COMPANY

Harry E.—Ventilation, drainage and condition as to safety, very good.

Forty Fort.—Ventilation good; drainage fair; condition as to safety, good.

Mt. Lookout.—Ventilation fair; drainage and general condition, good.

KINGSTON COAL COMPANY

Kingston No. 4.—Ventilation, drainage and condition as to safety, good.

EAST BOSTON COAL COMPANY

East Boston.—Ventilation and drainage fair; condition as to safety, good.

PLYMOUTH COAL COMPANY

Black Diamond.—Ventilation, drainage and general condition as to safety, fair.

RAUB COAL COMPANY

Louise.—Ventilation, drainage and condition as to safety, fair.

CLEAR SPRING COAL COMPANY

Clear Spring. Ventilation, drainage and condition as to safety, good.

STEVENS COAL COMPANY

Stevens. Ventilation good, drainage and condition as to safety, fair.

DELAWARE, LACKAWANNA AND WESTERN RAILROAD COMPANY

Pettebone.—Ventilation, drainage and general condition as to safety, good.

TROY COAL COMPANY

Troy.—Ventilation poor in some places; drainage good; condition as to safety, fair.

IMPROVEMENTS

LEHIGH VALLEY COAL COMPANY

Maltby Colliery—Outside.—A new 8-inch silt bore hole from the surface to the Marcy vein was completed. The old 8-inch silt bore hole was reopened and recased. Considerable repairs and changes were made to breaker. The Rock plane was considerably improved and extended.

Maltby—Inside.—The work of reopening and cleaning the main intake and return air course in the Marcy vein was completed. Electric haulage has been installed in No. 4 lift in the Marcy vein, and also at the head of No. 6 plane in the Six Foot vein. A new slope has been started to the east off main tail rope slope. Preparations are under way for a new rock slope from the Six Foot to the Marcy vein in the River district. Diamond drill driving, to locate old plane and flooded districts, was continued.

Westmoreland Colliery—Outside.—Extensive repairs to breaker. A new breaker with a self-acting Barney equipment completed. A new breaker plane hoisting engine was completed. An 8-inch silt bore hole from the surface to the Six Foot vein was reopened and recased. A series of test holes to prove rock cover in the Pittston vein were driven.

Westmoreland—Inside.—In the Six Foot vein a Y slope on the south side of the Mt. Lookout anticlinal was completed and equipped with an electric hoist. Electric haulage was extended between the foot of No. 1 slope and No. 2 plane. A new electric pump was installed in New Slope district, in the Six Foot vein. A rock manway was driven through the fault near the foot of No. 1 slope; also a rock manway from the Marcy to the Pittston vein on the tunnel level was completed. A 4-inch drainage bore hole from the Pittston to the Marcy vein was completed. In the Marcy vein a new electric pump was installed in No. 3 slope district, and a 11 degree rock plane started from the Marcy to the Pittston. Electric haulage was extended to No. 2 slope district. A concrete-steel overcast was completed in No. 3 slope district.

Exeter Colliery—Outside.—Extensive repairs were made to breaker. A concrete foundation and installation of new jigs in the washery were completed. The conveyor trestling between the breaker and the washery was entirely rebuilt. High pressure air compressor at the Red Ash shaft was removed to the new compressor house east of the boiler plant. A concrete air conduit for the new Blower system for the boilers was constructed. An 8-inch bore hole from the surface to the Checker vein for the breaker refuse silt, was completed, and preparations for the installation of a Jeffrey's crusher were made. The electric light system on the surface and in the mines was extended. Considerable changes to locomotive tracks were made.

Exeter—Inside.—Preparations for the installation of a new pumping plant in the Pittston vein are being made. The air-motor haulage system was installed in the Checker vein. In the Marcy vein preparations are being made for the installation of air motor haulage. A "Y" slope was completed in the Marcy vein in the west district and engine installed. Considerable changes in the extension of air haulage in the Red Ash vein were completed.

TEMPLE IRON COMPANY

Mt. Lookout Colliery.—A bore hole was drilled from the surface to the Marcy vein, through which a rope operates the Ross slope. A pair of 14x18-inch Flory engines was installed in the 22 x 22 foot brick building for power to operate the above mentioned slope. 516 feet of 8-inch steam pipe from the new boiler house, leading to both fans and both hoisting engines, were installed. This gives them two steam lines to both hoisting engines and fans. An 18 x 30-inch engine was installed to operate the North side fan, to replace the 13 x 16-inch engine formerly in use.

Forty Fort Colliery.—A 7 x 12 foot airway was driven from the Eleven Foot vein to the surface, in a 30 degree pitch, and a 7 x 20 foot ventilating fan, enclosed in a concrete building, installed on airway. A new brick engine house and new foundations were erected immediately in the rear of the old hoisting engine house, and the hoisting engines moved into the new building. A brick building was also erected to cover the breaker pumps.

Harry E. Colliery.—A Carpenter dust-removing system has been installed in the breaker and is giving very good results.

KINGSTON COAL COMPANY

No. 4 Breaker is being overhauled and rebuilt while mining operations are carried on as usual. The work is almost completed. The circular screens have been dispensed with and new mechanical pickers installed, dispensing with all boys under the age of sixteen years. A new brick-concrete wash house for the employes has been constructed, equipped with 100 steel lockers, 12 bath tubs, shower bath, hot and cold water and all conveniences. A new brick addition to boiler house has been completed and 600 H. P. additional B. & W. Water Tube boilers installed. The wooden building encasing the engines at No. 2 bore-hole and Cooper slope substituted with brick-concrete. The No. 1 shaft rock slope 450 feet long driven through roll in rock for the development of the Orchard vein under the Flats. A similar slope has been driven through the fault to reach the Bennett vein. A brick safety lamp station installed on the surface. An additional ambulance, with rubber tires, spring stretchers, etc., has been purchased. The school for the foreign miners was continued throughout the year. A duplex four stage centrifugal pump installed in the Orchard vein, inside slope. Concrete girders have substituted the old wooden timber at No. 4 shaft and turnout. A new Emergency Hospital at foot of the shaft. Three ventilating tunnels completed in Orchard vein. A new quintduplex electric pump, 1,200 gallons per minute, is being installed at the foot of inside Red Ash slope, discharging through 10-inch wood lined pipe 5,000 feet in length. Two new concrete-steel overcasts completed in Ross vein.

STEVENS COAL COMPANY

Stevens Colliery—Outside—New four deck L. V. Pattern shaker, 22 feet long, with the driving gear placed on a large block of concrete on the side of the breaker. This prevents the trembling effect in the breaker and has given good results. The refuse plane at the side of the breaker was extended 300 feet to the ridge of the mountain, which gives 75 feet of vertical height to go over the old refuse dump. A boiler house fuel conveyor 350 feet long was put in operation to take the fuel from breaker to boiler room, instead of taking it in cars by mule power. A new coal haulage arrangement was installed. A 36-inch x 10 inch Vulcan coal conveyor, 300 feet long, was placed on the east side of the breaker, and a plane from this conveyor about 600 feet long was erected. The loaded cars now run from top of shaft by gravity to foot of this plane. This arrangement does away with this organization formerly maintained at top of breaker.

Stevens—Inside.—A rock slope on a pitch of 20 degrees was driven from the Ross or Clark vein slope to the Babylon vein. The electric motor haulage roads in the Fifth vein tunnel, were extended 1,700 feet on the west side and on the east side 900 feet; and in the Red Ash vein the electric haulage roads were extended 200 feet on west side.

DELAWARE, LACKAWANNA AND WESTERN RAILROAD COMPANY

Pettebone Colliery.—This colliery was closed down for general repairs on August 16. The work of retimbering the main shaft is now under way. When the timbering is completed a brick partition will be erected separating the hoistway and airway from the Red Ash vein to the surface, at a depth of 1,147 feet, which they anticipate will improve the ventilation considerably. The work of installing a 150 horse power electric hoist on No. 1 plane, Cooper vein, to operate Cooper and Five foot veins has been completed, the No. 1 plane having been extended to the Five Foot seam. A rock tunnel of 40 degrees pitch has been driven from the Cooper to connect with the extension of No. 1 plane referred to above, which will be used for second opening and return airway. The following rock tunnels have also been completed during the year:

(a) Tunnel Lance to Five Foot vein on 5 per cent. grade.

(b) Tunnel Lance to Five Foot on 30 degrees pitch for second opening.

(c) Short rock tunnel was also driven to connect the main return from Bennett vein to old workings of Cooper vein, which will be used later to convey the air currents from No. 1 plane workings.

(d) "B" gangway has been extended from Hillman to Kidney vein.

Pettebone Colliery—Outside.—A 1,250 horse power Cochrane heater, feed water regulators, pump governors, etc., have been installed at this boiler plant, which have improved conditions very materially.



NINTH DISTRICT

LUZERNE COUNTY

Wilkes-Barre, Pa., February 20, 1910.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor to transmit herewith my annual report as Inspector of Mines for the Ninth Anthracite District, for the year ending December 31, 1909.

The report contains the statistical information required by law, a brief description of fatal and non-fatal accidents, and also a brief description of the general condition of the mines.

Respectfully submitted,

D. T. DAVIS,
Inspector.

19—23—1909.

SUMMARY OF STATISTICS

Number of collieries,	15
Number of mines,	31
Number of mines in operation,	31
Number of tons of coal shipped to market,	490,642
Number of tons used at mines for steam and heat,	412,394
Number of tons sold to local trade and used by employes,	171,248
Number of tons produced,	5,493,284
Number of tons produced by compressed air machines,	——
Number of tons produced by electrical machines,	——
Number of persons employed inside of mines,	8,024
Number of persons employed outside,	2,308
Number of fatal accidents inside of mines,	28
Number of fatal accidents outside,	2
Number of non-fatal accidents inside of mines,	44
Number of non-fatal accidents outside,	10
Number of tons of coal produced per fatal accident inside,	196,189
Number of persons employed per fatal accident inside,	287
Number of persons employed per fatal accident outside,	1,154
Number of persons employed per non-fatal accident inside,	182
Number of persons employed per non-fatal accident outside,	231
Number of wives made widows,	21
Number of children made orphans,	50
Number of steam locomotives used inside of mines,	1
Number of steam locomotives used outside,	12
Number of compressed air locomotives used inside,	3
Number of compressed air locomotives used outside,	——
Number of electric motors used inside,	20
Number of electric motors used outside,	——
Number of fans in use,	33
Number of furnaces in use,	——
Number of gaseous mines in operation,	18
Number of non-gaseous mines in operation,	13
Number of new mines opened,	4
Number of old mines abandoned,	——

TABLE A

PRODUCTION OF COAL

Names of Operators	Tons
Kingston Coal Company,	1,431,631
Delaware, Lackawanna and Western Railroad Company,	1,196,001
Lehigh and Wilkes-Barre Coal Company,	1,062,884
Delaware and Hudson Company,	1,056,103
Parrish Coal Company,	402,689
Plymouth Coal Company,	169,494
George F. Lee Coal Company,	73,931
West Nanticoke Coal Company,	75,595
Bright Coal Company,	12,500
Dunn Coal Company,	12,457
Total,	5,493,284

Production by Counties

Luzerne,	5,493,284

TABLE B.—Fatal and non-fatal accidents inside and outside of mines; number of tons of coal produced per accident; number of persons employed; number employed per accident

Names of Operators	Fatal Accidents			Non-Fatal Accidents			Tons of coal produced per fatal accident inside	Tons of coal produced per non-fatal accident inside	Number of employes inside	Number of employes outside	Total number of employes	Number of employes inside per fatal accident	Number of employes outside per fatal accident	Number of employes inside per non-fatal accident	Number of employes outside per non-fatal accident
	Inside	Outside	Total	Inside	Outside	Total									
Kingston Coal Co.,	6	.....	6	8	3	11	238,605	178,954	1,602	452	2,054	267	.....	200	151
Delaware, Lackawanna and Western Railroad Co.,	8	.....	8	2	4	6	149,500	598,000	1,918	348	2,266	240	.....	959	87
Lehigh and Wilkes-Barre Coal Co.,	6	1	7	10	1	11	177,147	106,288	1,609	399	2,008	268	399	161	399
Delaware and Hudson Co.,	4	1	5	11	2	13	264,026	96,009	1,570	568	2,138	393	568	143	284
Parrish Coal Co.,	3	.....	3	11	.....	11	134,230	36,608	829	305	1,134	276	.....	75	.....
Plymouth Coal Co.,	1	.....	1	2	.....	2	169,494	84,747	268	126	394	268	.....	134	.....
Miscellaneous Companies,	.....	.....	.....	.....	.....	.....	.....	.....	228	110	338	.....	.....	.....	.....
Totals and averages for district,	28	2	30	44	10	54	196,189	124,847	8,024	2,308	10,332	287	1,154	182	231

TABLE C.—Classification of Fatal Accidents Inside and Outside of Mines

	Months													
	January	February	March	April	May	June	July	August	September	October	November	December	Totals	Percentages
Causes of Accidents Inside														
Falls of coal,	1			1			3	1		1			7	25.00
Falls of slate,		1			1			1	1				4	14.29
Falls of roof,			1	2	2		2			1	1	1	10	35.71
Mine cars,		1							1				2	7.14
Explosions of gas,						2			1		1		4	14.29
Explosions of powder and dynamite,				1									1	3.57
Totals,	1	2	1	4	3	2	5	2	3	2	2	1	28	100.00
Causes of Accidents Outside														
Miscellaneous,				1								1	2	100.00
Totals,				1								1	2	100.00
Grand totals inside and outside,	1	2	1	5	3	2	5	2	3	2	2	2	30	

TABLE D.—Classification of Non-Fatal Accidents Inside and Outside of Mines

	Months													
	January	February	March	April	May	June	July	August	September	October	November	December	Totals	Percentages
Causes of Accidents Inside														
Falls of coal,				2					1			1	4	9.09
Falls of slate,				1		1						1	3	6.82
Falls of roof,					1			2				2	5	11.37
Mine cars,	1	1	1	3		1		1	1				9	20.45
Explosions of gas,			1	2	1				2				6	13.64
Explosions of powder and dynamite,	1												1	2.27
Blasts, premature and otherwise,			1	1				1	2		1		6	13.64
Mules,			1										1	2.27
Miscellaneous,	1		1	3	1					1	1	1	9	20.45
Totals,	3	1	5	12	3	2		4	6	1	2	5	44	100.00
Causes of Accidents Outside														
Cars,	1		1								1		3	30.00
Miscellaneous,	1		1		2	1			2				7	70.00
Totals,	2		2		2	1			2		1		10	100.00
Grand totals inside and outside,	5	1	7	12	5	3		4	8	1	3	5	54	

TABLE E.—Occupations of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Inside													
Miners,	1	....	1	3	1	2	2	1	3	1	1	1	17
Miners' laborers,	....	1	....	1	1	....	3	....	....	1	....	....	7
Doorboys and helpers,	....	1	....	....	....	....	....	1	....	....	1	....	3
Company men,	....	....	....	....	1	....	....	....	....	....	....	....	1
Totals,	1	2	1	4	3	2	5	2	3	2	2	1	28
Outside													
Laborers,	....	....	....	1	....	....	....	....	....	....	....	....	1
Shaker boys,	....	....	....	....	....	....	....	....	....	....	....	1	1
Totals,	....	....	....	1	....	....	....	....	....	....	....	1	2
Grand totals inside and outside,	1	2	1	5	3	2	5	2	3	2	2	2	30

TABLE F.—Occupations of Persons Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Inside													
Miners,	1	....	2	3	....	1	....	2	2	....	1	3	15
Miners' laborers,	....	....	2	4	....	....	....	1	3	....	....	2	12
Drivers and runners,	1	1	1	3	....	1	....	1	1	....	....	....	9
Foot men,	....	....	....	1	1	....	....	....	....	....	....	....	2
Company men,	....	....	....	1	2	....	....	....	....	....	....	....	3
Electricians,	....	....	....	....	....	....	....	....	....	....	1	....	1
Carpenters,	....	....	....	....	....	....	....	....	....	1	....	....	1
Drillers,	1	....	....	....	....	....	....	....	....	....	....	....	1
Totals,	3	1	5	12	3	2	....	4	6	1	2	5	44
Outside													
Blacksmiths and carpenters,	....	....	....	....	....	....	....	....	1	....	....	....	1
Engineers and firemen,	1	....	....	....	....	....	....	....	....	....	....	....	1
Machinists,	....	....	1	....	....	....	....	....	....	....	....	....	1
Laborers,	....	....	1	....	2	1	....	....	1	....	....	....	5
Trackmen,	1	....	....	....	....	....	....	....	....	....	1	....	2
Totals,	2	....	2	....	2	1	....	....	2	....	1	....	10
Grand totals inside and outside,	5	1	7	12	5	3	....	4	8	1	3	5	54

TABLE G.—Nationality of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
American,				3	1		1					1	6
English,			1										1
Welsh,	1	1						1					3
Irish,							1						1
German,										1			1
Polish,		1		2	1	2			3		1		10
Slavonian,							1			1		1	3
Lithuanian,											1		1
Austrian,					1								1
Russian,							2	1					3
Totals,	1	2	1	5	3	2	5	2	3	2	2	2	30

TABLE H.—Nationality of Persons Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
American,	1		3	4	3	2			2		1		16
English,	1			1									2
Welsh,					1					1		1	3
Irish,			1	1							1		3
German,									1				1
Polish,	3	1	1	1				2	4			1	13
Slavonian,				3				1					4
Lithuanian,			1			1			1		1	1	5
Austrian,				2	1								3
Russian,			1					1				2	4
Totals,	5	1	7	12	5	3		4	8	1	3	5	54

TABLE I.—Operators and mines, kind of openings, type and size of fans, size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents and number of persons employed inside

Names of Operators and Mines	Kind of opening	Gaseous or non-gaseous	Method of ventilation	Diameter of fan in feet and inches	Width of blades in feet and inches	Depth of blades in feet and inches	Number of revolutions per minute	Water gauge developed—in inches	Name of fan	Power used	Number of splits of air currents	Number of cubic feet of air per minute entering the mine at inlet	Total quantity of air per minute circulating in all the splits in cubic feet	Number of cubic feet per minute passing out at outlet	Number of persons employed inside
Kingston Coal Co.,															
Kingston Colliery No. 2:															
Kingston No. 3,	Shaft,	Gaseous,													
Kingston No. 2,	Shaft,	Gaseous.	Fan,	25	8	7.8	70	1.3	Guibal,	Steam,	8	165,000	115,000	172,000	423
Kingston,	Slope,	Non-gas.	Fan,	21	6	6.9	78	1.5	Guibal,	Steam,	6	113,000	100,000	117,000	425
Kingston No. 41,	Drift,	Non-gas.									8	73,000	67,000	76,000	331
Kingston No. 42,	Drift,	Non-gas.													
Kingston No. 43,	Drift,	Non-gas.													
Kingston No. 44,	Drift,	Non-gas.													
Dodds,	Tunnel,	Non-gas.													
Gaylord Colliery:															
Gaylord,	Slope,	Gaseous,	Fan,	25	8	8	60	1.1	Guibal,	Steam,	8	106,000	28,500	109,000	423
Delaware, Lackawanna and Western Railroad Co.															
Woodward Colliery:															
Woodward No. 1,	Shaft,	Gaseous,	Fan,	16	5	6.3	105	2	Dickson open,	Steam,					
Woodward No. 2,	Shaft,	Gaseous,	Fan,	16	5.8	6.3	105	2	Dickson, closed,	Steam,	33	634,250	624,000	688,000	1,387
Woodward No. 3,	Shaft,	Gaseous,	Fan,	20	5	6	95	2.4	Dickson, closed,	Steam,					

Avondale Colliery:																
Avondale,	Shaft,	---	Gaseous,	Fan,	16	5	4	45	2	D. L. and W. open,	Steam,	----	10	170,000	162,400	182,000	531
				Fan,	16	5	4	117	2.2	Dickson, open,	Steam,	----					
				Fan,	14	5.6	3.6	100	1	Dickson, open,	Steam,	----					
Lehigh and Wilkes-Barre Coal Co.																	
Nottingham Colliery:																	
Nottingham,	Slope,	---	Gaseous,	Fan,	23.9	5.7	5.11	75	1	Guibal, --	Steam,	----	5	133,000	80,000	138,000	------
				Fan,	24	7.10	6	78	2								
				Fan,	24	8	6	76	2.2								
Nottingham,	Shaft,	---	Gaseous,	Fan,	24	8	6	77	2.1	Guibal, --	Steam,	----	16	458,000	343,285	496,970	987
				Fan,	24	8	6	78	2.2								
				Fan,	24	8	6	77	2.2								
Lance No. 11 Colliery:																	
Lance No. 11,	Shaft,	---	Gaseous,	Fan,	34.3	10.11	8.45	43	2								
				Fan,	35	11.9	8.9	43	2	Guibal, --	Steam,	----	14	332,590	235,550	409,960	622
				Fan,	35	11.9	8.9	44	2.2								
Delaware and Hudson Co.																	
Plymouth Colliery No. 5:																	
Boston,	Shaft,	---	Gaseous,	Fan,	22	5	6.6	85	3.1								
Boston,	Drift,	---	Non-gas.	Fan,	17	5	4	100	.7	Guibal, --	Steam,	----	19	403,900	350,000	465,300	580
Plymouth,	Shaft,	---	Gaseous,	Fan,	22	5	6.6	75	1.8								
Plymouth,	Shaft,	---	Gaseous,	Fan,	28	10	7.6	75	1.8								
Plymouth No. 3 Colliery:																	
Plymouth,	Shaft,	---	Gaseous,	Fan,	17	5	4	85	1.9	Guibal, --	Steam,	----	8	174,200	145,000	198,000	434
Plymouth,	Drift,	---	Non-gas.	Fan,	17	5	4	45	.9								
Plymouth No. 2 Colliery:																	
Plymouth,	Shaft,	---	Gaseous,	Fan,	28	10	7.6	71	3.4	Guibal, --	Steam,	----	7	150,000	137,000	171,000	556
				Fan,	22.5	5	6.6	75	1.8								
Parrish Coal Co.																	
Buttonwood Colliery:																	
Buttonwood,	Shaft,	---	Gaseous,	Fan,	35	11.9	10.8	48	2								
				Fan,	24	8	7.4	70	2	Guibal, --	Steam,	----	20	310,000	202,000	322,000	507
Parrish Colliery:				Fan,	20	5.8	5.8	80	2								
Parrish,	Slope,	---	Gaseous,	Fan,	24	8	7.4	70	2.1	Guibal, --	Steam,	----	9	157,300	129,000	184,600	322
				Fan,	20	5.8	5.8	80	2.1								
Plymouth Coal Co.																	
Dodson Colliery:																	
Dodson,	Shaft,	---	Gaseous,	Fan,	20	6.6	5.8	85	2.2	Guibal, --	Steam,	----	6	140,000	82,860	70,000	268
George F. Lee Coal Co.																	
Chauncey Colliery:																	
Chauncey,	Slope,	---	Non-gas.	Natural,	------	------	------	------	------	----------	----------		3	49,000	34,500	52,000	192
	Slope,	---															
	Drift,	---															

TABLE I—Continued

Names of Operators and Mines	Kind of opening	Gaseous or non-gaseous	Method of ventilation	Diameter of fan in feet and inches	Width of blades in feet and inches	Depth of blades in feet and inches	Number of revolutions per minute	Water gauge developed—in inches	Name of fan	Power used	Number of splits of air currents	Number of cubic feet of air per minute entering the mine at inlet	Total quantity of air per minute circulating in all the splits in cubic feet	Number of cubic feet per minute passing out at outlet	Number of persons employed inside
Bright Coal Co.															
Hillside Colliery:															
Hillside,	Slope,	Non-gas.	Fan,	12	4	2.10	90	1	Guibal,	Steam,	1	20,000	15,000	22,000	20
Dunn Coal Co.															
Dunn Colliery:															
Dunn,	Slope,	Non-gas.	Natural,								1	7,400	4,100	8,000	26

TABLE 1.—Operators, location of collieries, railroads, etc.

Names of Operators and Collieries	County	Name of General Superintendent	Post Office	Name of Superintendent	Post Office	Railroad to Mine
Kingston Coal Co. Kingston No. 2, Gaylord,	Luzerne,	F. E. Zerby,	Wilkes-Barre,	Thomas Williams, Ralph Smith,	Edwardsville, Wilkes-Barre,	Delaware and Hudson
Delaware, Lackawanna and Western Railroad Co. Woodward, Avondale,	Luzerne,	R. A. Phillips,	Scranton,	Henry G. Davis,	Kingston,	D. L. and W.
Lehigh and Wilkes-Barre Coal Co. Nottingham, Lance No. 11, Inman No. 21,	Luzerne,	C. F. Huber,	Wilkes-Barre,	Morgan R. Morgans, Inside, W. H. Herring, Outside,	Wilkes-Barre,	C. R. R. of N. J.
Delaware and Hudson Co. Plymouth Nos. 2, 3 and 5,	Luzerne,	C. C. Rose,	Scranton,	E. R. Pettebone,	Dorranceton,	Delaware and Hudson
Parrish Coal Co. Buttonwood, Parrish,	Luzerne,	H. H. Ashley,	Wilkes-Barre,	Thomas R. Evans,	Plymouth,	C. R. R. of N. J.
Plymouth Coal Co. Dodson,	Luzerne,	Gilbert Jones,	Pittston,			D. L. and W.
George F. Lee Coal Co. Chauncey,	Luzerne,	George F. Lee,	Wilkes-Barre,	Benjamin Amos,	Plymouth,	D. L. and W.
West Nanticoke Coal Co. West Nanticoke Washery,	Luzerne,	A. D. W. Smith,	Wilkes-Barre,	J. J. Richards,	Wilkes-Barre,	Pennsylvania
Bright Coal Co. Hillside,	Luzerne,	Jonathan Vipond,	Scranton,	Thomas Baggott,	Plymouth,	
Dunn Coal Co. Dunn,	Luzerne,	Lewis Edwards,	Edwardsville,			

TABLE 2.—Number of tons of coal mined, number of days worked, number of persons employed, number killed and injured, quantity of powder, dynamite and so-called safety explosives used, etc.

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Explosives: Number of pounds of powder used	Explosives: Number of pounds of dynamite used	Explosives: Number of pounds of so-called safety explosives used	Number of horses and mules
Kingston Coal Co.													
Kingston No. 2,	Luzerne,	794,746	18,750	83,052	896,548	277	1,460	5	7	651,525	7,350	.....	151
Gaylord,		204,135	17,500	10,808	232,443	233	521	1	4	135,000	6,500	.....	55
		998,881	36,250	93,860	1,128,991	.....	1,981	6	11	786,525	13,850	.....	206
Washeries:													
Kingston No. 2,	Luzerne,	145,556	4,400	5,996	155,952	182	40	.....	.....	.....	.....	.....	.....
Gaylord,		120,583	.....	26,105	146,688	246	33	.....	.....	.....	.....	.....	.....
		266,139	4,400	32,101	302,640	.....	73	.....	.....	.....	.....	.....	.....
Totals,		1,265,020	40,650	125,961	1,431,631	.....	2,054	6	11	786,525	13,850	.....	206
Delaware, Lackawanna and Western Railroad Co.													
Woodward,	Luzerne,	836,805	45,427	5,995	888,227	258	1,649	5	3	709,475	14,613	4,470	124
Avondale,		269,148	36,480	2,146	307,774	257	617	3	3	122,800	9,900	.....	62
Totals,		1,105,953	81,907	8,141	1,196,001	.....	2,266	8	6	832,275	24,513	4,470	186
Lehigh and Wilkes-Barre Coal Co.													
Nottingham,	Luzerne,	610,083	61,650	4,807	676,540	197	1,215	5	6	301,000	9,341	.....	192
Lance No. 11,		354,137	29,930	2,277	386,344	182	793	1	3	285,175	11,521	29,176	108
Inman No. 21.*		.....	.....	.....	.....	.....	.....	1	2	.....	.....	.....	.....
Totals,		964,220	91,580	7,084	1,062,884	.....	2,008	7	11	586,175	20,862	29,176	300

*Sinking shaft.

Delaware and Hudson Co.													
Plymouth No. 5,	Luzerne,	393,847	492	7,425	401,764	199	855	3	3	196,175	999	..	126
Plymouth No. 2,		298,745	25,443	.....	324,218	227	727	....	3	235,800	3,863	.....	84
Plymouth No. 3,		143,311	19,769	2,547	165,627	95	546	2	7	174,000	2,294	.....	61
		835,903	45,734	9,972	891,609	.....	2,128	5	13	605,975	7,156	.....	271
Washeries:													
Plymouth No. 5,	Luzerne,	66,461	37,443	.....	103,904	124	10	....	....	.....	.....	.....	.....
Plymouth No. 2,†		43,545	17,045	.....	60,590	77	.....	....	....	.....	.....	.....	.....
		110,006	54,488	.....	164,494	.....	10	....	....	.....	.....	.....	.....
Totals,		945,909	100,222	9,972	1,056,103	.....	2,138	5	13	605,975	7,156	.....	271
Parrish Coal Co.													
Buttonwood,	Luzerne,	204,743	25,000	5,956	235,699	192	670	1	9	174,575	53,000	300	120
Parrish,		126,656	35,000	5,334	166,990	176	464	2	2	86,575	62,030	.....	66
Totals,		331,399	60,000	11,290	402,689	.....	1,134	3	11	261,150	115,030	300	186
Plymouth Coal Co.													
Dodson,	Luzerne,	139,987	25,000	4,507	169,494	196	394	1	2	35,875	7,948	100	44
George F. Lee Coal Co.													
Chauncey,	Luzerne,	64,626	7,300	2,605	73,931	203	252	....	....	2,500	4,900	.....	27
West Nanticoke Coal Co.													
West Nanticoke Washery,	Luzerne,	72,128	2,835	632	75,595	243	30	....	....	.....	.....	.....	.....
Bright Coal Co.													
Hillside,	Luzerne,	10,500	1,400	600	12,500	197	30	....	....	800	300	....	2
Dunn Coal Co.													
Dunn,	Luzerne,	10,500	1,500	456	12,456	208	26	....	....	9,000	250	....	....
Grand totals,		4,909,642	412,394	171,248	5,493,284	.....	10,332	30	54	3,120,275	194,809	34,046	1,222

†Included with employes of Plymouth No. 2 colliery.

TABLE 2.—Part 2.

Names of Operators	County	Number of Boilers					Locomotives			Number of steam engines of all classes	Total horse power	Number of pumps delivering water to surface	Capacity in gallons per minute	Quantity delivered to surface per minute—gallons	Number of electric dynamos	Number of air compressors
		Cylindrical	Horse power	Tubular	Horse power	Total horse power	Steam	Air	Electric							
Kingston Coal Co.,		----	------	15	3,550	3,550	6	------	6	35	4,450	3	3,060	2,400	1	----
Delaware, Lackawanna and Western Railroad Co.,		----	------	20	4,375	4,375	4	------	14	53	5,809	5	10,600	4,200	3	----
Lehigh and Wilkes-Barre Coal Co.,		----	------	24	5,290	5,290	3	3	------	125	8,092	4	4,832	2,400	----	7
Delaware and Hudson Co.,		117	3,159	13	3,100	6,259	------	------	------	206	12,830	9	12,200	3,650	2	6
Parrish Coal Co.,	Luzerne,	*18	720	30	4,500	5,220	------	------	------	49	8,221	2	2,167	1,452	----	8
Plymouth Coal Co.,		----	------	15	2,650	2,650	------	------	------	12	1,650	3	2,100	1,400	1	3
George F. Lee Coal Co.,		----	------	4	400	400	------	------	------	4	300	----	------	------	----	----
West Nanticoke Coal Co.,		----	------	4	375	375	------	------	------	5	200	1	800	800	----	----
Bright Coal Co.,		----	------	2	160	160	------	------	------	2	140	1	60	60	----	----
Buma Coal Co.,		----	------	1	35	35	------	------	------	2	35	2	300	300	----	----
Totals,		135	3,879	128	24,435	28,314	13	3	20	487	41,727	30	36,119	16,662	7	24

*Not in use.

TABLE 3.—Number of each class of employes inside and outside of mines

Names of Operators	County	Inside												Outside									Grand total inside and outside
		Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Doorboys and helpers	Pumpmen	Company men	All other employes	Total inside	Superintendents	Foremen	Blacksmiths and carpenters	Engineers and firemen	Slate pickers (boys)	Slate pickers (men)	Bookkeepers and clerks	All other employes	Total outside	
Kingston Coal Co.,	Luzerne,	5	8	4	594	541	217	31	3	83	116	1,602	2	5	55	37	15	25	6	307	452	2,054
Delaware, Lackawanna and Western Railroad Co.,		4	3	17	608	651	160	68	15	.....	392	1,918	....	3	34	45	55	6	5	200	348	2,266
Lehigh and Wilkes-Barre Coal Co.,		3	4	17	573	462	198	81	12	214	45	1,609	....	2	20	66	101	22	8	180	399	2,008
Delaware and Hudson Co.,		4	5	14	446	521	210	73	10	249	38	1,570	....	6	22	105	100	95	7	233	568	2,138
Parrish Coal Co.,		2	3	10	252	202	88	52	9	166	45	829	2	3	15	48	56	72	9	100	305	1,134
Plymouth Coal Co.,		1	1	3	67	75	43	11	6	21	40	268	1	1	7	24	22	.....	2	69	126	394
George F. Lee Coal Co.,		1	....	1	57	87	15	.....	.....	18	13	192	....	1	3	3	19	8	1	25	60	252
West Nanticoke Coal Co.,		.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	...	1	1	5	4	4	1	14	30	30
Bright Coal Co.,		1	.....	.....	8	8	2	1	.....	.....	.....	20	1	.....	.....	3	2	3	1	.....	10	30
Dunn Coal Co.,		1	.....	.....	5	9	1	.....	.....	.....	.....	16	1	.....	.....	2	2	.....	.....	5	10	26
Totals,	.....	22	24	66	2,610	2,556	934	317	55	751	689	8,024	7	22	157	338	376	235	40	1,133	2,308	10,332

TABLE 3.—Part 2

Names of Operators	County	Average Number of Days Worked in Breaker												
		January	February	March	April	May	June	July	August	September	October	November	December	Total
Kingston Coal Co.,	Luzerne,	22	17	24	24	17	19	19	18	20	24	25	26	255
Delaware, Lackawanna and Western Railroad Co,.		19	15	24	22	22	24	17	22	20	24	24	24	257
Lehigh and Wilkes-Barre Coal Co.,		19	16	19	23	14	12	9	6	8	18	22	23	189
Delaware and Hudson Co.,		19	14	18	17	18	12	9	12	12	13	15	15	174
Parrish Coal Co.,		17	15	19	19	13	13	8	10	12	16	21	21	184
Plymouth Coal Co.,		15	17	17	15	16	18	17	16	16	17	16	16	196
George F. Lee Coal Co.,		16	13	22	------	2	22	19	22	20	21	23	23	203
Bright Coal Co.,		10	16	15	10	11	20	20	25	14	15	17	24	197
Dunn Coal Co.,		11	17	22	23	22	12	22	20	12	14	19	14	208

TABLE 4.—Fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Colliery	County	Nature and Cause of Accident in Brief
Jan. 14	William Davis,	Welsh,	Miner,	66	S.			Avondale,		Fatally injured by fall of coal while barring out shot at face. Died same day.
Feb. 6	Joseph Ezick,	Polish,	Laborer,	26	M.	1		Nottingham,		Killed by fall of slate at face while loading a car.
8	Herbert Griffiths,	Welsh,	Patcher,	17	S.			Buttonwood,		Killed by being run over by an empty car on gangway. He was taking out sprags from the car when the team started, and threw him between the trip.
March 16	Joseph Studley,	English,	Miner,	39	M.	1	4	Kingston No. 2,		Killed by fall of rock while cleaning out hitch at face.
April 10	Richard Grimes,	American,	Laborer,	50	M.	1	5	Plymouth No. 5,		Fatally injured, struck on head by block and pulley while assisting to remove old pipe out of bore hole. Died April 16. Outside.
	William Lamoreaux,	American,	Miner,	34	M.	1	1	Gaylord,	Luzerne,	Killed by fall of top coal at face while dislodging prop.
13	Michael Maher,	American,	Miner,	35	M.	1		Plymouth No. 3,		Fatally burned while making a charge of powder with lamp on head in gangway. Died same day.
	William Skulic,	Polish,	Laborer,	52	S.			Woodward,		Killed by fall of rock at face while assisting in barring down coal.
27	Joseph Zelinski,	Polish,	Miner,	34	M.	1	5	Woodward,		Fatally injured by fall of rock at face. Died May 1.
May 10	Frank Fox,	American,	Company man,	33	M.	1	2	Parrish,		Back broken by fall of rock in old chamber. Died August 8.
21	Lucas Tempran,	Austrian,	Miner,	54	M.	1		Plymouth No. 5,		Killed by fall of rock at face.
24	Dominick Bozowski,	Polish,	Laborer,	30	M.	1	3	Plymouth No. 3,		Killed by fall of slate at face while shoveling coal.
June 23	Alexander Koproski,	Polish,	Miner,	28	M.	1	1	Nottingham,		Fatally burned by an explosion of gas in old airway. Died June 24.

TABLE 4—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Colliery	County	Nature and Cause of Accident in Brief
June 23	Jacob Dramanski,	Polish,	Miner,	23	M.	1	....	Nottingham,		Fatally burned by an explosion of gas in old airway. Died June 23.
July 6	John Finnerty,	American,	Miner,	34	S.	....	....	Kingston No. 2,		Injured internally by fall of rock at face while filing machine bits. Died same day.
9	John Gilgallon,	Irish,	Miner,	45	M.	1	3	Avondale,		Killed by fall of coal on slope while preparing to set timbers.
14	John Kerlitski,	Russian,	Laborer,	37	M.	1	4	Parrish,		Killed by fall of coal at face while loading a car. A temporary prop had been set, but did not prevent rock from falling.
22	Henry Sibbo,	Russian,	Laborer,	35	M.	1	4	Avondale,		Killed by fall of coal from pillar at face while loading a car. The coal fell without warning.
26	Charles Polak,	Slavonian,	Laborer,	26	M.	1	2	Inman No. 21,		Fatally injured by fall of rock in shaft while loading a bucket. Died the same day.
Aug. 6	William Jones,	Welsh,	Miner,	55	M.	1	2	Woodward,	Luzerne,	Killed by fall of slate at face while drilling a hole in pillar.
7	William Klusaites,	Russian,	Doorboy,	19	S.	....	....	Dodson,		Killed by fall of coal on gangway. He was running to jump on the rear end of a car to open a door a short distance from his door. The car knocked out the timber and the top coal fell just as the boy reached the car.
Sept. 10	Phillip Dinko,	Polish,	Miner,	52	M.	1	....	Nottingham,		Hands, face and body burned by an explosion of gas at face. Died September 22.
	Joseph Zockoioski,	Polish,	Miner,	26	S.	....	....	Woodward,		Fatally injured. He was squeezed between car and pillar on gangway. Died September 22.
15	Adam Jellis,	Polish,	Miner,	33	M.	1	4	Kingston No. 2,		Killed by fall of slate in chamber while picking coal from pillar to load a car.

Oct.	13	George Norwart,	German,	Miner,	45	M.	1	4	Plymouth No. 5,			Killed by fall of coal at face while barring out coal after a blast.
	14	Frank Savage,	Slavonian,	Laborer,	36	M.	1	2	Kingston No. 2,			Killed by fall of rock in tunnel while loading a truck.
Nov.	9	Stanley Reszutak,	Polish,	Miner,	29	S.			Woodward,			Killed by fall of rock at face while drilling a hole.
	17	Joseph Golehewski,	Lithuanian,	Doorboy,	16	S.			Lance No. 11,	Luzerne,		Fatally burned by an explosion of gas in chamber. While taking down a canvas door his lamp came in contact with a body of gas.
Dec.	16	Arthur Gibson,	American,	Shaker Attendant,	19	S.			Nottingham,			Fatally injured by falling from floor in breaker to the floor below. Died December 18. Outside.
	22	Frank Oravitz,	Slavonian,	Miner,	46	M.	1	4	Kingston No. 2,			Fatally injured by fall of rock at face while drilling a hole in the bottom bench.

TABLE 5.—Non-fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Colliery	County	Nature and Cause of Accident in Brief
Jan. 13	John Trosh,	Polish,	Driller,	31	S.	Inman No. 21,		Leg fractured by being struck by a jack bar in shaft.
14	Andrew Remenick,	Polish,	Trackman,	40	M.	Avondale,		Compound fracture of leg. Squeezed between car and breaker. Outside.
15	Edward Babcock,	American,	Driver	21	S.	Plymouth No. 3,		Arm crushed by falling under cars on gangway.
22	Andrew Hoodock,	Polish,	Miner,	46	M.	Plymouth No. 3,		Hands, face and body burned while making up powder with lamp on head in chamber.
24	John Bossom,	English,	Engineer,	54	M.	Woodward No. 3,		Face and hands burned by an explosion of gas in fan house. Outside.
Feb. 18	Joseph Sincavage,	Polish,	Driver,	21	S.	Woodward,		Forehead fractured. He was struck by trip of cars on slope.
March 12	John Sampson,	Lithuanian,	Miner,	37	M.	Dodson,		Hands and face burned by an explosion of gas at face.
16	Henry Platt,	American,	Machinist,	28	M.	Woodward,		Injured by being squeezed between tower cage and side of shaft. Outside.
18	John Cavanaugh,	Irish	Miner,	37	M.	Buttonwood,	Luzerne,	Compound fracture of lower jaw. He was struck by flying coal from blast on gangway.
	Joseph Mazar,	Polish,	Driver,	20	S.	Avondale,		Cheek bone fractured. He was kicked by his mule on gangway.
20	Clark Krum,	American,	Laborer,	32	M.	Plymouth No. 2,		Arm fractured by being caught between cars. Outside.
22	Alonza Geddis,	American,	Laborer,	51	M.	Buttonwood,		Hip dislocated. He was struck by a car in chamber.
	George Fetoc,	Russian,	Laborer,	30	M.	Inman No. 21,		Compound fracture of skull. A piece of rock falling down shaft and struck him.
April 2	George Matyas,	Slavonian,	Miner,	48	M.	Buttonwood,		Head, back and face burned by an explosion of gas in face of gangway.
5	Joseph Kachzerak,	Austrian,	Driver,	18	S.	Plymouth No. 5,		Lung punctured and ribs fractured. Caught between derailed car and timber on gangway.

April	6	Peter Murgavitch,	Austrian,	Laborer,	23	S.	Buttonwood,			Hands and face burned by an explosion of gas at face.
	9	Irvin Miller,	American,	Driver,	25	M.	Dodson,			Leg fractured by being struck by a prop on gangway.
	16	Benjamin Dadura,	Polish,	Laborer,	19	S.	Plymouth No. 3,			Leg fractured by fall of coal off the pillar in chamber.
	17	Daniel Hester,	American,	Slope footman,	22	S.	Plymouth No. 3,			Leg fractured. He slipped and fell while switching a car on gangway.
	20	John Kane,	Irish,	Laborer,	23	S.	Kingston No. 2,			Skull fractured. He was struck with flying coal from a blast in chamber.
	21	Stephen Blasko,	Slavonian,	Laborer,	18	S.	Plymouth No. 2,			Ankle dislocated. A prop fell off car and struck him, at face.
	23	Gwilliam Gibbons,	American,	Driver,	18	S.	Kingston No. 2,			Leg fractured. He slipped and fell under car on gangway.
		Job Harvey,	American,	Company man,	27	M.	Kingston No. 2,			Skull fractured by flying piece of pipe while dividing wedge on gangway.
	24	John Adamski,	Slavonian,	Miner,	29	M.	Plymouth No. 3,			Leg fractured and ankle dislocated by fall of coal from the pillar at face.
	30	Thomas Ballamy,	English,	Miner,	54	M.	Plymouth No. 3,			Leg fractured and back bruised by fall of slate at face.
May	7	James Kriger,	American,	Laborer,	25	M.	Gaylord,			Hands and face burned while throwing water on hot ashes on bank. Outside.
	10	Owen Jones,	Welsh,	Company man,	31	S.	Parrish,			Back and leg bruised by fall of rock in chamber.
	11	Edward Morgan,	American,	Foot-tender,	23	M.	Buttonwood,			Both legs fractured. He was struck by wire rope on slope.
	14	Andrew Andovchak,	Austrian,	Company man,	30	M.	Plymouth No. 5,	Luzerne,		Hands and face burned by explosion of gas from bore hole pipe in chamber.
	22	Peter McNalis,	American,	Laborer,	46	M.	Kingston No. 2,			Leg fractured. A stick of timber rolled against his leg. Outside.
June	17	Mansfield Roberts,	American,	Miner,	59	M.	Nottingham,			Body bruised and cut by fall of slate in gangway.
	19	Arthur Meeker,	American,	Laborer,	23	S.	Kingston No. 2,			Leg fractured by an iron shaft rolling against him. Outside.
	23	Adam Linkevich,	Lithuanian,	Driver,	19	S.	Lance No. 11,			Hip fractured by being squeezed between cars on gangway.
Aug.	27	John Stromuck,	Russian,	Driver,	18	S.	Nottingham,			Arm fractured. He fell and was struck by car on gangway.
	30	Stanley Danish,	Polish,	Miner,	50	M.	Parrish,			Face, arms and body injured by premature blast at face.
	31	Paul Evans,	Slavonian,	Miner,	41	M.	Kingston No. 2,			Hips injured by fall of rock at face.
		Valenty Perchak,	Polish,	Laborer,	32	M.	Kingston No. 2,			Hips injured by fall of rock at face.
Sept.	8	Edgar Frisbie,	American,	Carpenter,	35	M.	Plymouth No. 3,			Strangulated hernia, by falling off shaft bunting in shaft. Outside.
	10	Michael Botseck,	Polish,	Laborer,	26	M.	Nottingham,			Hands, face and body burned by an explosion of gas at face.
		Michael Bandish,	Polish,	Laborer,	28	S.	Nottingham,			
	15	Joseph Price,	American,	Miner,	38	M.	Plymouth No. 2,			Leg fractured by a piece of coal falling from pillar at face.

TABLE 5—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Colliery	County	Nature and Cause of Accident in Brief
Sept. 15	John Shinskey,	Lithuanian,	Driver,	20	S.	Lance No. 11,		Ribs fractured and injured internally. He slipped when jumping on car and was caught between car and rib on airway.
17	Joseph Bigman,	Polish,	Miner,	28	S.	Gaylord,		Face and body cut by flying coal from a premature blast at face.
	Peter Blincenski,	Polish,	Laborer,	27	S.	Gaylord,		Face and body cut by flying coal from a premature blast at face on gangway.
29	John Marks,	German,	Laborer,	56	M.	Nottingham,		Ribs fractured. He fell in engine ash pit while trying to jump across. Outside.
Oct. 11	Tally Jones,	Welsh,	Carpenter,	38	M.	Nottingham,		Skull fractured by a piece of rock falling down shaft and striking him.
Nov. 2	David Powell,	American,	Electrician,	36	M.	Buttonwood,		Lacerated head and concussion of brain by a piece of coal falling down shaft and striking him.
22	Robert Barton,	Irish,	Trackman,	40	S.	Avondale,	Luzerne,	Compound fracture of leg by a derailed car. Outside.
26	George Sobleski,	Lithuanian,	Miner,	48	M.	Lance No. 11,		Ribs fractured by flying coal from a premature blast at face.
Dec. 8	Joseph Bialeck,	Polish,	Miner,	33	M.	Plymouth No. 5,		Spine fractured by fall of top coal at face.
9	Frank Strack,	Russian,	Laborer,	53	M.	Buttonwood,		Leg fractured by a piece of rock falling from pillar at face.
11	Walter Latvis,	Lithuanian,	Miner,	21	S.	Buttonwood,		Leg fractured by fall of top slate at face.
14	Joseph Hillman,	Russian,	Laborer,	25	M.	Buttonwood,		Leg fractured by fall of top rock at face.
21	Frank Richards,	Welsh,	Miner,	50	M.	Gaylord,		Ribs fractured. He was run over by cart at slope.

EXPLOSIONS OF GAS AT NOTTINGHAM COLLIERY

On the twenty-third of June an explosion of gas occurred at Nottingham No. 3 Slope, 11 East, Red Ash Vein, by which two miners, Alexander Koproski and Jacob Dramanski, were killed. On the day of the explosion they had gone up to 10 East airway with the intention of going as far as breast 15 to rap on the pillar to determine how great a distance breast 15 would have to proceed before tapping the above airway. A fall of rock had taken place on 10 East airway that left a cavity in the roof. The men had passed over the fall, had made the rapping and were returning to their working places. While on the top of the fall their naked lights came in contact with a small body of gas that had collected, due to the fall, and an explosion resulted by which the two men were burned about the heads and bodies. Dramanski died the same day and Koproski the next day. The inquest failed to disclose how the gas had accumulated as the evidence and record book both showed that the place had been examined according to law. The verdict further states that the men went into old workings where their work did not call them and failed to use their safety lamps. The company and the officials were exonerated from blame.

On the tenth of September another explosion occurred in No. 3 Slope, 11 East, Red Ash Vein, by which Phillip Dinko, a miner, was fatally burned and two other workmen severely burned. At the time of the accident Dinko was engaged with others in timbering the face of the gangway. The place had struck a fault and the vein was about 22 feet high. The fire boss on his rounds in the morning found the place in a safe condition and free from gas. In order to facilitate the work a platform had been erected directly in the mouth of the cross-cut deflecting the air from striking the roof and thus allowing a small body of gas to accumulate. The men were working with naked lights although they had safety lamps in their possession and orders had been given that those working near the roof should use safety lamps only. The verdict exonerated the company from blame.

CONDITION OF COLLIERIES

KINGSTON COAL COMPANY

Kingston No. 2.—Ventilation, drainage and general condition as to safety, good.

Gaylord.—Ventilation, drainage and general condition as to safety, good.

DELAWARE, LACKAWANNA AND WESTERN RAILROAD COMPANY

Woodward.—Ventilation, drainage and general condition as to safety, good.

Avondale.—Ventilation, drainage and general condition as to safety, good.

LEHIGH AND WILKES-BARRE COAL COMPANY

Nottingham.—Ventilation, drainage and general condition as to safety, good.

Lance No. 11.—Ventilation, drainage and general condition as to safety, good.

DELAWARE AND HUDSON COMPANY

Plymouth No. 5.—Ventilation, drainage and general condition as to safety, good.

Plymouth No. 2.—Ventilation, drainage and general condition as to safety, good.

Plymouth No. 3.—Ventilation, drainage and general condition as to safety, good.

PARRISH COAL COMPANY

Buttonwood.—Ventilation, drainage and general condition as to safety, good.

Parrish.—Ventilation, drainage and general condition as to safety, good.

PLYMOUTH COAL COMPANY

Dodson.—Ventilation, drainage and general condition as to safety, good.

GEORGE F. LEE COAL COMPANY

Chauncey.—Ventilation, drainage and general condition as to safety, good.

BRIGHT COAL COMPANY

Hillside.—Ventilation, drainage and general condition as to safety, good.

DUNN COAL COMPANY

Dunn.—Ventilation, drainage and general condition as to safety, good.

IMPROVEMENTS

KINGSTON COAL COMPANY

Kingston No. 2 Colliery.—No. 2 breaker was entirely overhauled and rebuilt without interfering with the output. It is equipped with shaking screens and mechanical pickers and no boys under the age of sixteen years are employed. This breaker commands a large local retail trade; therefore the streets and foot of the breaker have been paved with brick-concrete.

A new concrete foundation-stalls frame building has been completed for seventy mules.

A brick mule hospital and harness shop erected.

A concrete powder house built for the Old Slope district.

The wooden building over the slope hoisting engines at Mountain tunnels substituted with brick-concrete.

The wooden housing and upcast at No. 3 shaft fan has been substituted with concrete.

A rope hole has been completed from the surface to the Ross vein and a set of hoisting engines installed on the surface, thus removing the inside slope rope from No. 3 shaft and the inside gangways.

A tunnel has been completed on the first lift from Bennett to Red Ash vein, and another tunnel has been started on the lower lift from Ross to Bennett vein.

A series of tunnels and rock holes has been completed from the Ross vein to the overlying split, and mining has now been started in the small vein 2 feet 6 inches thick.

Gaylord Colliery.—The wooden housing and building of the 25-foot ventilating fan has been replaced with reinforced concrete and brick. The fan is reversible and fire-proof.

A new brick-concrete wash-house has been erected for the use of the employes, and equipped with 100 steel lockers, ten bath tubs, shower baths, hot and cold water and steam. The conveniences and sanitary arrangements are worthy of mention.

A brick-concrete mule hospital has been constructed.

Powder house has been changed to a more isolated place.

A new 8-inch bore hole driven for pump discharge from Bennett vein to the surface for a new pump in the Bennett vein.

Progress has been made in the reopening of the old caved district in the Red Ash vein. To this end a slope 1,500 feet long has been sunk through the old workings in the Red Ash vein and a tunnel 650 feet long driven from the Bennett vein to the Ross vein.

Additional bore holes have been completed for culm flushing, which has been extensively carried on during the last year, into the old workings.

DELAWARE, LACKAWANNA AND WESTERN RAILROAD COMPANY

Woodward Colliery, Outside.—The work of replacing old trestling work connecting No. 1 shaft landing with surface with re-inforced concrete, is now under way and will soon be completed.

The breaker building has been re-piped and is now heated with exhaust steam in a very satisfactory manner.

Considerable repairs and improvements, including the installation of mechanical pickers, etc., have been made at the breaker with very good results.

Inside.—The work of sinking No. 3 shaft, located on the Kingston Flats, from the surface to the Cooper vein to a depth of 783 feet, was completed by Messrs. John Pugh and Sons on September 12. This work was started September 13, 1907, thus making the time occupied in doing the work about two years. The erection of a steel tower over this shaft is now under way and will soon be completed.

The underground workings have been connected to the main shafts at Woodward, and the work of grading roads for the mining of coal in this neighborhood is now being done.

The No. 17 slope, or surface slope, was sunk from the Snake Island to the Abbott vein. A 16-foot ventilating fan was installed upon this slope, and is now in operation.

The following rock tunnels were driven:

(a) Rock slope through fault, Hillman to Kidney vein, on 8 per cent. dip, was completed.

(b) Second opening for this slope in 2 per cent. grade was completed.

(c) Rock tunnel, Cooper to Lance, on shaft level gangway, connecting old workings of Lance vein, was completed.

(d) The work of grading over and through anticlinal at foot of No. 1 slope, Red Ash vein, is now under way and will soon be completed.

(e) Short rock tunnel on No. 3 West lift, No. 2 Slope, Cooper vein to Cooper vein through fault, completed.

(f) Also rock tunnel from Cooper to Lance vein, No. 3 East lift, No. 1 slope, completed.

The electric sub-station at head of No. 2 slope, Cooper vein, is now in operation. The high tension lines are being carried from the Nanticoke power plant through a 6-inch bore hole to this room, where the current is transformed and distributed to the various points along the haulage roads.

In addition to this, 20 concrete arches have been erected in No. 1 tunnel, Red Ash vein, to replace timbering on main haulage road.

A triplex expansion pump at foot of No. 1 Shaft, to pump the water to the surface, is now under way and will soon be completed and installed in a concrete and steel pump room of large dimensions.

Avondale Colliery, Outside.—A concrete storeroom has been erected of sufficient capacity to handle all the supplies at the colliery.

The work of installing a 25-foot ventilating fan for auxiliary purposes to main shaft is progressing very well and ought to be in operation during the early part of 1910.

A new concrete and brick mule barn is also under way, and, when completed, the present dilapidated buildings, located but a short distance from the barn now being constructed, will be torn down.

Inside.—The new sub-station in No. 2 slope has been placed in operation, the high tension line being carried from the Nanticoke power plant through a bore hole to the sub-station.

An additional 14-inch bore hole has been connected to the No. 2 slope electric pump 800 feet deep, through which the water is now being pumped to the surface.

Two concrete and steel air bridges have been erected in No. 8 slope, which has improved the ventilation.

The work of extending rock tunnel from Ross to Mills vein is under way.

A small shaft to connect Nos. 5 and 7 slopes is being sunk for the purpose of ventilating the old workings in these slopes by return air currents.

The mule barn near foot of shaft has been practically rebuilt with concrete walls and floor, and conditions have been improved very materially.

Dundee Colliery.—Operations were started at this point August 16 for the sinking of two shafts, 50 feet 2 inches x 12 feet in the clear, to a depth of about 920 feet, to what is known as the "Hillman vein." Both shafts have been sunk to a depth of 48 and 58 feet, respectively.

In connection with the sinking of these shafts and the development of this important property, there appeared in the Wilkes-Barre Record of December 13, 1909, some very interesting reminiscences regarding the sinking of the old Dundee Shaft located about 1,250 feet southwest of this locality. The following is quoted from the Wilkes-Barre Record of the Times of December 7, 1859, fifty years ago, when the old Dundee Shaft pierced the Mills seam at a depth of 810 feet:

"An era in the history of mining anthracite in the Wyoming coal field has been inaugurated by the success of the Dundee Coal Company in reaching a superior vein of eleven feet in thickness at a depth of nearly 800 feet below the surface.

From a distance we have watched the progress of this shaft with anxious eyes, and we are sure that the pleasure to us of their success can very little be less than to the members of the company. Much credit has been thrown on our coal field by the partial and unsuccessful exploration for coal in Hanover and Newport. Borings have been abandoned at a depth of three or four hundred feet, leaving doubt about the existence of coal, in the minds of strangers, and, indeed, in the minds of some of the less sanguine of our own citizens.

The Dundee Coal Company, composed principally of our own citizens, resolved to sink its shaft to a depth of 1,000 feet if coal could not sooner be obtained. The largest vein cut had been but four feet, with many smaller ones. Still, without hesitation, yard after yard was cut. Mr. F. Koerner, an intelligent and energetic man, had charge of the work, which progressed as rapidly as the hard rock would permit, until 780 feet had been passed. Then indications of coal appeared and an auger was put down three feet to a small eight-inch seam of slate below which was a vein of fully eight feet of beautiful coal. To the bottom of the vein is 792 feet, and to provide for the dropping of the water from above the shaft was sunk a few feet deeper, probably 800 feet in all."

The story is continued with a narrative of the personal experiences of the editor in a descent of the shaft. A large stream of water entered at a depth of 250 feet, but was cared for by pumps. The editor mined a few specimens of coal at the bottom with illumination furnished by a few gas jets pouring forth from the vein itself. He says, in his story, that the vein was supposed to be the Mills vein, found at Nanticoke, and that other veins of greater thickness were believed to be underlying it. This belief was well founded, for the territory in which this vein was located is now considered the richest in the Wyoming coal field, and the lower veins are found at a depth of from 1,800 to 2,000 feet. The ancient chronicler also tells of the gas found in the vein, for it was the presence of this gas in large quantities and the lack of knowledge of proper ventilating methods in those days that caused the subsequent abandonment of the mine.

LEHIGH AND WILKES-BARRE COAL COMPANY

Lance No. 11 Colliery, Inside.—Tunnel, Cooper to Five Foot, No. 1 Slope, 5th West.

Nottingham No. 15 Colliery, Outside.—Corliss breaker engine.

Reynolds No. 16 Colliery, Inside.—Rock plane, Ross to Ross, No. 4 tunnel East.

DELAWARE AND HUDSON COMPANY

Plymouth Nos. 1 and 2 Colliery.—A return airway was driven from No. 14 plane, Abbott vein to No. 1 shaft.

An air shaft was sunk 55 feet from surface to Lance vein workings and 300 feet of return airway was driven in vein.

A 50,000 gallon water tank was erected and pipe connections made for boiler supply.

Plymouth No. 3 Colliery.—Extensive repairs were made to breaker and the timbering in main shaft was replaced by concrete from top to bottom. A new 8-inch rope hole was drilled 425 feet from surface for No. 6 plane, Red Ash vein.

Plymouth No. 5 Colliery.—No. 7 plane, Bennett vein, was driven 1,200 feet and an inch rope bore hole was sunk 290 feet from surface.

No. 3 plane, Bennett vein, was driven 250 feet.

Boston.—No. 14 plane was driven from the Boston Split Red Ash 250 feet through rock to the Top Red Ash and 600 feet in the latter vein.

No. 15 plane, Bottom Red Ash vein, was driven 1,100 feet.

The Boston breaker was torn down and the coal is now being prepared at No. 5 breaker.



TENTH DISTRICT

LUZERNE COUNTY

Nanticoke, Pa., February 20, 1910.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor of transmitting herewith my annual report as Inspector of Mines for the Tenth Anthracite District, for the year ending December 31, 1909.

The report contains the statistical information required by law, with a brief description of the fatal accidents and the condition of the mines.

Respectfully submitted,

JOSEPH J. WALSH,
Inspector.

SUMMARY OF STATISTICS

Number of collieries,	9
Number of mines,	39
Number of mines in operation,	39
Number of tons of coal shipped to market,	3,437,080
Number of tons used at mines for steam and heat,	358,334
Number of tons sold to local trade and used by employes,	48,565
Number of tons produced,	3,843,979
Number of tons produced by compressed air machines,	——
Number of tons produced by electrical machines,	——
Number of persons employed inside of mines,	7,109
Number of persons employed outside,	2,175
Number of fatal accidents inside of mines,	36
Number of fatal accidents outside,	6
Number of non-fatal accidents inside of mines,	40
Number of non-fatal accidents outside,	12
Number of tons of coal produced per fatal accident inside,	106,777
Number of persons employed per fatal accident inside,	197
Number of persons employed per fatal accident outside,	363
Number of persons employed per non-fatal accident inside,	178
Number of persons employed per non-fatal accident outside,	181
Number of wives made widows,	23
Number of children made orphans,	52
Number of steam locomotives used inside of mines,	1
Number of steam locomotives used outside,	25
Number of compressed air locomotives used inside,	13
Number of compressed air locomotives used outside,	.....
Number of electric motors used inside,	34
Number of electric motors used outside,	1
Number of fans in use,	34
Number of furnaces in use,	.....
Number of gaseous mines in operation,	31
Number of non-gaseous mines in operation,	8
Number of new mines opened,	1
Number of old mines abandoned,	.....

TABLE A

PRODUCTION OF COAL

Names of Operators	Tons
Susquehanna Coal Company,	1,321,625
Delaware, Lackawanna and Western Railroad Company,	1,135,348
West End Coal Company,	621,938
Lehigh and Wilkes-Barre Coal Company,	487,762
Alden Coal Company,	277,306
Total,	3,843,979

Production by Counties

Luzerne,	3,843,979

TABLE B.—Fatal and non-fatal accidents inside and outside of mines; number of tons of coal produced per accident; number of persons employed; number employed per accident

Names of Operators	Fatal Accidents			Non-Fatal Accidents			Tons of coal produced per fatal accident inside	Tons of coal produced per non-fatal accident inside	Number of employes inside	Number of employes outside	Total number of employes	Number of employes inside per fatal accident	Number of employes outside per fatal accident	Number of employes inside per non-fatal accident	Number of employes outside per non-fatal accident
	Inside	Outside	Total	Inside	Outside	Total									
Susquehanna Coal Co.,	12	5	17	15	9	24	110,135	88,108	2,584	1,075	3,659	215	215	172	119
Delaware, Lackawanna and Western Railroad Co.,	17	.....	17	10	.....	10	78,550	113,535	2,242	406	2,648	132	.....	224	.....
West End Coal Co.,	5	1	6	7	2	9	124,388	88,848	1,082	327	1,409	216	327	154	164
Lehigh and Wilkes-Barre Coal Co.,	2	.....	2	7	1	8	243,881	69,680	703	185	888	352	.....	100	185
Alden Coal Co.,	.....	.....	.....	1	.....	1	.....	277,306	498	182	680	.....	.....	498	.....
Totals and averages for district.	36	6	42	40	12	52	106,777	96,099	7,109	2,175	9,284	197	363	178	181

TABLE C.—Classification of Fatal Accidents Inside and Outside of Mines

	Months													
	January	February	March	April	May	June	July	August	September	October	November	December	Totals	Percentages
Causes of Accidents Inside														
Falls of coal,	2						1	1					4	11.11
Falls of slate,			1										1	2.78
Falls of roof,		2	1				1	2		1	1	1	9	25.00
Mine cars,	1				1			1		1	1		5	13.89
Explosions of gas.,					1						1		2	5.55
Suffocation by gas., etc.,											8		8	22.22
Explosions of powder and dynamite			1										1	2.78
Blasts, premature and otherwise,			1		1			1					3	8.33
Falling into slopes, etc.,					1			1					2	5.56
Miscellaneous,		1											1	2.78
Totals,	3	3	4		4		2	6		2	11	1	36	100.00
Causes of Accidents Outside														
Cars,	1								1		1		3	50.00
Machinery,											1		1	16.67
Miscellaneous,									2				2	33.33
Totals,	1								3		2		6	100.00
Grand totals inside and outside,	4	3	4		4		2	6	3	2	13	1	42	

TABLE D.—Classification of Non-Fatal Accidents Inside and Outside of Mines

	Months													
	January	February	March	April	May	June	July	August	September	October	November	December	Totals	Percentages
Causes of Accidents Inside														
Falls of coal,			1				2						3	7.50
Falls of slate,		1											1	2.50
Falls of roof,	4	1			1		3	1			4	1	15	37.50
Mine cars,	2	1					2		1	2	1		9	22.50
Explosions of gas,		1		1	1						1		4	10.00
Blasts, premature and otherwise,				1								1	2	5.00
Falling into slopes, etc.,					1								1	2.50
Miscellaneous,			2	2			1						5	12.50
Totals,	6	4	3	4	3		8	1	1	2	6	2	40	100.00
Causes of Accidents Outside														
Cars,					1					1	1		3	25.00
Machinery,					1				1	1			3	25.00
Miscellaneous,			1	2	1				1			1	6	50.00
Totals,			1	2	3				2	2	1	1	12	100.00
Grand totals inside and outside,	6	4	4	6	6		8	1	3	4	7	3	52	

TABLE E.—Occupations of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Inside													
Miners,	1	1	3	----	3	----	1	3	----	1	5	----	18
Miners' laborers,	1	1	----	----	1	----	1	2	----	----	5	1	12
Doorboys and helpers,	----	----	----	----	----	----	----	1	----	----	----	----	1
Timbermen,	----	1	1	----	----	----	----	----	----	----	----	----	2
Footmen,	1	----	----	----	----	----	----	----	----	----	----	----	1
Brakemen,	----	----	----	----	----	----	----	----	----	1	1	----	2
Totals,	3	3	4	----	4	----	2	6	----	2	11	1	36
Outside													
Foremen,	1	----	----	----	----	----	----	----	----	----	----	----	1
Engineers and firemen,	----	----	----	----	----	----	----	----	1	----	1	----	2
Slatepickers (boys),	----	----	----	----	----	----	----	----	----	----	1	----	1
Brakemen,	----	----	----	----	----	----	----	----	1	----	----	----	1
Headmen,	----	----	----	----	----	----	----	----	1	----	----	----	1
Totals,	1	----	----	----	----	----	----	----	3	----	2	----	6
Grand totals inside and outside,	4	3	4	----	4	----	2	6	3	2	13	1	42

TABLE F.—Occupations of Persons Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Inside													
Miners,	3	2	1	1	1	----	4	1	----	----	4	2	19
Miners' laborers,	2	2	----	2	2	----	2	----	----	1	2	----	13
Drivers and runners,	----	----	----	----	----	----	----	----	----	1	----	----	1
Doorboys and helpers,	----	----	1	1	----	----	----	----	1	----	----	----	3
Bratticemen,	----	----	----	----	----	----	1	----	----	----	----	----	1
Motormen,	----	----	1	----	----	----	----	----	----	----	----	----	1
Trackmen,	1	----	----	----	----	----	----	----	----	----	----	----	1
Footmen,	----	----	----	----	----	----	1	----	----	----	----	----	1
Totals,	6	4	3	4	3	----	8	1	1	2	6	2	40
Outside													
Electricians,	----	----	----	----	----	----	----	----	1	----	----	----	1
Blacksmiths and carpenters,	----	----	----	----	----	----	----	----	1	----	----	----	1
Miners,	----	----	----	----	1	----	----	----	----	----	----	----	1
Engineers and firemen,	----	----	----	1	1	----	----	----	----	----	----	----	2
Laborers,	----	----	1	----	----	----	----	----	----	----	----	1	2
Brakemen,	----	----	----	----	----	----	----	----	----	----	1	----	1
Machine helpers,	----	----	----	----	----	----	----	----	----	1	----	----	1
Oilers,	----	----	----	----	1	----	----	----	----	1	----	----	2
Spiral tenders,	----	----	----	1	----	----	----	----	----	----	----	----	1
Totals,	----	----	1	2	3	----	----	----	2	2	1	1	12
Grand totals inside and outside,	6	4	4	6	6	----	8	1	3	4	7	3	52

TABLE G.—Nationality of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
American,			1						3		1		5
English,											1		1
Welsh,		1											1
Irish,											1		1
German,	2							1			2		5
Polish,	1		3		4			4		1	8	1	22
Italian,		2											2
Slavonian,										1			1
Lithuanian,	1						2	1					4
Totals,	4	3	4		4		2	6	3	2	13	1	42

TABLE H.—Nationality of Persons Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
American,	1		1	1			1		2	1	1		8
English,					1								1
Irish,							1				1		2
Polish,	4	3		5	4		5		1	2	3	2	29
Hungarian,							1						1
Italian,	1		1		1							1	4
Slavonian,		1	1								1		3
Lithuanian,								1			1		2
Austrian,			1										1
Russian,										1			1
Totals,	6	4	4	6	6		8	1	3	4	7	3	52

TABLE I.—Operators and mines, kind of openings, type and size of fans, size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents and number of persons employed inside

Names of Operators and Mines	Kind of opening	Gaseous or non-gaseous	Method of ventilation	Diameter of fan in feet and inches	Width of blades in feet and inches	Depth of blades in feet and inches	Number of revolutions per minute	Water gauge developed—in inches	Name of fan	Power used	Number of splits of air currents	Number of cubic feet of air per minute entering the mine at inlet	Total quantity of air per minute circulating in all the splits in cubic feet	Number of cubic feet per minute passing out at outlet	Number of persons employed inside
Susquehanna Coal Co.															
Colliery No. 5:															
Number 2,	Shaft,	Gaseous,	2 Fans,	25	8	8	60	1.6	Guibal,	Steam,	6	119,000	82,000	123,000	332
				20	6	6	65	1.5							
Number 4,	Shaft,	Gaseous,	Fan,	20	6	6	60	1.1	Guibal,	Steam,	3	55,000	39,000	57,000	190
Number 5,	Shaft,	Gaseous,	Fan,	8	2	3	30	1	Sturdevant.	Steam,	4	30,000	24,000	31,000	88
Number 4,	Slope,	Gaseous,	4 Fans,	15	4	4	65	1.2	Guibal,	Steam,	8	172,325	120,525	173,440	290
				25	8	8	103	1.8							
				20	6	6	88	.2							
				25	8	8	60	1.8							
Number 29,	Tunnel,	Non-gas.,	Natural,								1	6,000	4,500	6,500	22
Number 1,	Drift,	Non-gas.,	Natural,								1	10,500	7,000	10,900	25
Colliery No. 6:															
Number 6,	Tunnel,	Gaseous,	Fan,	10	3	4	61	7	Guibal,	Steam,	6	44,000	38,000	45,000	175
Number 6,	Shaft,	Gaseous,	2 Fans,	20	6	6	58	1	Guibal,	Steam,	5	180,224	175,653	186,828	299
				25	8	8	58	9							
Number 7,	Shaft,	Gaseous,	Fan,	20	6	6	60	2	Guibal,	Steam,	4	85,000	82,500	86,000	270
Number 10,	Slope,	Gaseous,	Fan,	5	2	3	175	1.5	Capell,	Electricity,	1	20,000	18,000	21,000	50
Number 1,	Drift,	Non-gas.,									1	16,000	14,000	16,500	41
Colliery No. 7:															
Number 1 South,	Shaft,	Gaseous,	Fan,	25	8	8	60	1.6	Guibal,	Steam,	10	182,470	143,510	191,655	457
Number 1 North,	Shaft,	Gaseous,	2 Fans,	20	6	6	72	1.5	Guibal,	Steam,	11	212,625	134,600	224,000	397
				25	8	8	60	1.7							

Delaware, Lackawanna and Western Railroad Co.															
Auchincloss Colliery:															
Number 1,	Shaft,	Gaseous,	Fan,	35	9.6	7.1	50	2	Guibal,	Steam,	13	177,767	142,145	201,172	426
Number 2,	Shaft,	Gaseous,													
Bliss Colliery:															
Bliss,	Shaft,	Gaseous,	Fan,	35	9.2	9.1	47	1.6	Guibal,	Steam,	15	215,700	198,650	221,000	603
Espy,	Tunnel,	Gaseous,	Fan,	12	3.6	3	145	1.4	Guibal,	Steam,	5	47,000	42,000	51,850	190
Truesdale Colliery:															
Mills,	Slope,	Gaseous,	Fan,	14	3.6	3	120	.9	Open running.	Steam,	6	85,800	80,400	90,400	286
Number 5,	Slope,	Gaseous,									1	9,200	8,700	9,300	28
Number 6,	Slope,	Gaseous,	Fan,	7	2.5	3.1	108	.2	Open running.	Steam,	1	19,950	16,500	21,000	74
Truesdale,	Tunnel,	Gaseous,	Fan,	12	3.3	3	124	.8	Open running.	Electricity,	3	27,280	25,500	31,400	87
Number 1,	Shaft,	Gaseous,	Fan,	24	7	5	62	1.4	Guibal,	Steam,	6	104,200	94,500	107,400	222
Number 2,	Shaft,	Gaseous,									9	119,800	85,300	122,501	264
West End Coal Co.															
West End Colliery:															
Sand,	Drift,	Non-gas.,	Fan,	16	6	4	60	1.2	Guibal,	Steam,	3	62,300	48,000	63,000	280
Long,	Drift,	Gaseous,	Fan,	20	6	6	80	1.4	Guibal,	Steam,	9	121,620	102,940	131,400	483
			Fan,	16	4	4	75	.8	Guibal,	Steam,					
No. 1 Lee,	Drift,	Gaseous,	Fan,	15	6	4	60	1.4	Guibal,	Electricity,	3	39,200	30,200	41,000	190
Golden,	Drift,	Non-gas.,	Fan,	16	6	4	70	1	Guibal,	Steam,	2	26,500	14,700	28,300	58
Barney,	Drift,	Non-gas.,									2	38,200	20,000	41,000	41
Number 6,	Slope,	Non-gas.,	Natural,								1	3,200	2,700	3,240	12
Lee No. 3,	Drift,	Non-gas.,	Natural,								1	5,300	3,700	5,400	18
Lehigh and Wilkes-Barre Coal Co.															
Wanamie Colliery:															
Number 2,	Slope,	Gaseous,	Fan,	24	8	6	73	1.2	Guibal,	Steam,	11	118,050	110,200	129,000	347
Number 1,	Drift,	Gaseous,									1	18,150	15,700	20,500	56
Number 3,	Drift,	Gaseous,									1	36,150	30,140	38,850	38
Number 3,	Slope,	Gaseous,	Fan,	24	8	6	67	1.3	Guibal,	Steam,	8	104,980	98,000	110,390	161
Polander,	Drift,	Gaseous,									1	31,000	27,900	33,750	40
Alden Coal Co.															
Alden Colliery:															
Number 1,	Shaft,	Gaseous,	Fan,	15	5	5	84	2	Guibal,	Steam,	7	109,250	71,000	116,500	114
Number 2,	Shaft,	Gaseous,	2 Fans,	24	9	5.1	60	1	Guibal,	Steam,	12	168,648	143,596	189,594	254
				25	8	8	66	1.5	Guibal,	Steam,					
Outside Slope,	Slope,	Gaseous,	Fan,	6	3	2	70	.5	Guibal,	Steam,	2	12,400	10,950	13,100	17
Baltimore,	Slope,	Gaseous,	Steam jet,								1	6,000	5,500	6,200	18

TABLE 1.—Operators, location of collieries, railroads, etc.

Names of Operators and Collieries	County	Name of General Superintendent	Post Office	Name of Superintendent	Post Office	Railroad to Mine
Susquehana Coal Co. Colliery No. 5, Colliery No. 6, Colliery No. 7,	Luzerne,	Robert A. Quinn,	Wilkes-Barre,	Francis H. Kohlbraker.	Nanticoke,	Pennsylvania.
Delaware, Lackawanna and Western Railroad Co. Auchincloss, Bliss, Truesdale,	Luzerne,	R. A. Phillips,	Scranton,	H. G. Davis,	Kingston,	D. L. and W.
West End Coal Co. West End,	Luzerne,	H. H. Brady, Jr.,	Scranton,	H. A. Fillmore,	Shickshinny,	Penna. and C. R. R. of N. J.
Lehigh and Wilkes-Barre Coal Co. Wanamie,	Luzerne,	C. F. Huber,	Wilkes-Barre,	W. H. Herring, Outside.	Wilkes-Barre,	C. R. R. of N. J.
Alden Coal Co. Alden,	Luzerne,	K. M. Smith,	Alden Station,	M. R. Morgans, Inside.		

TABLE 2.—Number of tons of coal mined, number of days worked, number of persons employed, number killed and injured, quantity of powder, dynamite and so-called safety explosives used, etc.

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Explosives: Number of pounds of powder used	Explosives: Number of pounds of dynamite used	Number of horses and mules
Susquehanna Coal Co.												
Colliery No. 5,	Luzerne,	340,991	73,747	16,523	431,261	211	1,304	5	8	11,817	27,219	117
Colliery No. 6,	Luzerne,	463,218	41,871	4,684	509,773	215	1,169	8	6	14,862	23,085	94
Colliery No. 7,	Luzerne,	317,949	62,642	----------	380,591	195	1,186	4	10	7,805	68,391	115
Totals,		1,122,158	178,260	21,207	1,321,625	------	3,659	17	24	34,484	118,695	326
Delaware, Lackawanna and Western Railroad Co.												
Auchincloss,	Luzerne,	161,209	12,331	5,908	179,448	175	544	11	1	79,500	13,780	36
Bliss,	Luzerne,	419,256	29,040	2,591	450,887	225	1,030	4	5	328,950	16,905	66
Truesdale,	Luzerne,	484,178	20,805	30	505,013	238	1,074	2	4	492,200	39,016	53
Totals,		1,064,643	62,176	8,529	1,135,348	------	2,648	17	10	900,650	69,701	155
West End Coal Co.												
West End,	Luzerne,	561,639	51,100	9,199	621,938	249	1,409	6	9	300,770	224,326	63
Lehigh and Wilkes-Barre Coal Co.												
Wanamie,	Luzerne,	440,085	45,433	2,244	487,762	198	888	2	8	61,930	44,675	117
Alden Coal Co.												
Alden,	Luzerne,	248,555	21,365	7,386	277,306	214	680	----	1	184,950	40,775	81
Grand totals,		3,437,080	358,334	48,565	3,843,979	------	9,284	42	52	1,482,784	498,172	742

TABLE 2.—Part 2.

Names of Operators	County	Number of Boilers					Locomotives			Number of steam engines of all classes	Total horse power	Number of pumps delivering water to surface	Capacity in gallons per minute	Quantity delivered to surface per minute—gallons	Number of electric dynamos	Number of air compressors
		Cylindrical	Horse power	Tubular	Horse power	Total horse power	Steam	Air	Electric							
Susquehanna Coal Co.,	Luzerne,	33	1,155	45	11,764	12,919	13	13	4	85	13,090	11	10,850	4,150	3	12
Delaware, Lackawanna and Western Railroad Co.,		....	.....	22	3,587	3,587	1	.....	20	48	8,025	10	8,380	6,980	3	5
West End Coal Co.,		....	.....	11	2,400	2,400	7	.....	11	28	1,875	4	1,500	1,300	4	3
Lehigh and Wilkes-Barre Coal Co.,		....	.....	10	1,666	1,666	3	.....	.....	48	2,303	5	4,258	2,080	....	....
Alden Coal Co.,		....	.....	8	1,535	1,535	2	.....	.....	9	1,375	2	1,800	1,000	1	3
Totals,		33	1,155	96	20,952	22,107	26	13	35	218	26,668	32	26,788	15,510	11	23

TABLE 3.—Number of each class of employes inside and outside of mines

Names of Operators	County	Inside											Outside									
		Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Doorboys and helpers	Pumpmen	Company men	All other employes	Total inside	Superintendents	Foremen	Blacksmiths and carpenters	Engineers and firemen	Slate pickers (boys)	Slate pickers (men)	Bookkeepers and clerks	All other employes	Total outside	Grand total inside and outside
Susquehanna Coal Co.,	Luzerne,	5	10	34	796	773	316	74	22	69	485	2,584	1	4	75	170	217	22	17	569	1,075	3,659
Delaware, Lackawanna and Western Railroad Co.,		5	1	21	682	892	132	45	8	456	------	2,242	----	4	26	46	86	3	9	232	406	2,648
West End Coal Co.,		2	7	1	500	300	61	19	6	86	100	1,082	1	1	14	23	53	51	4	180	327	1,409
Lehigh and Wilkes-Barre Coal Co.,		1	2	6	300	205	63	36	8	30	52	703	----	1	7	14	56	5	4	98	185	888
Alden Coal Co.,		1	1	5	158	173	70	31	4	55	------	498	1	1	12	28	46	12	8	74	182	680
Totals,		14	21	67	2,436	2,343	642	205	48	696	637	7,109	3	11	134	281	458	93	42	1,153	2,175	9,284

TABLE 3.—Part 2

Names of Operators	County	Average Number of Days Worked in Breaker												
		January	February	March	April	May	June	July	August	September	October	November	December	Total
Susquehanna Coal Co.,	Luzerne,	20	15	19	22	19	14	12	11	13	21	20	21	207
Delaware, Lackawanna and Western Railroad Co.,		16	14	22	19	19	22	21	13	10	17	19	21	213
West End Coal Co.,		23	20	25	19	24	18	17	15	19	24	22	23	249
Lehigh and Wilkes-Barre Coal Co.,		20	15	19	22	14	14	9	10	13	17	23	22	198
Alden Coal Co.,		16	16	21	11	15	18	18	21	20	19	20	19	214

TABLE 4.—Fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Colliery	County	Nature and Cause of Accident in Brief
Jan. 1	John Tomosa,	Lithuanian,	Laborer,	40	M.	1	3	Bliss,		Killed by fall of coal at face of his chamber.
8	August Grabofski,	German,	Foreman,	44	M.	1	6	Number 7,		Fatally injured by cars. Outside.
16	Julius Blockus,	German,	Miner,	45	M.	1	5	Number 5,		Killed by fall of coal at face of his chamber.
16	Edward Demski,	Polish,	Footman,	21	M.	1		Number 5,		Fatally injured by being squeezed between cars at foot of shaft.
Feb. 5	John Rapanotto,	Italian,	Miner,	28	M.	1		West End,		Killed by fall of rock at face of their chamber.
	Alberto Piermatto,	Italian,	Laborer,	21	S.					
11	David Vaughn,	Welsh,	Timberman,	48	M.	1		Number 7,		Fatally injured by prop falling on him at foot of shaft.
March 3	Andrew Gogofski,	Polish,	Miner,	32	M.	1	2	Number 7,		Killed by fall of slate at face of his chamber.
19	George Klotsko,	Polish,	Miner,	38	S.			West End,		Killed by an explosion of dynamite in his working place.
23	Frank Chikowfski,	Polish,	Miner,	25	M.	1	1	West End,	Luzerne,	Fatally injured by delayed blast at face of his chamber.
29	William McFadden,	American,	Timberman,	24	S.			Auchincloss,		Fatally injured by fall of rock while setting timber on slope.
May 1	John Vavrick,	Polish,	Miner,	40	M.	1	4	Number 5,		Fatally burned by gas at face of his chamber.
12	Valentine Lubinski,	Polish,	Miner,	39	M.	1	6	Auchincloss,		Killed by runaway car on slope.
26	John Shecket,	Polish,	Laborer,	21	S.			Wanamie,		Fatally injured by falling down pitch chamber.
	Michael Witkofski,	Polish,	Miner,	27	M.	1	2	Number 6,		Fatally injured by a premature blast.
July 19	Andrew Tracalage,	Lithuanian,	Laborer,	32	S.			Bliss,		Fatally injured by fall of coal at face of chamber.
22	Peter Kushinski,	Lithuanian,	Miner,	38	M.	1		Number 6,		Killed by fall of rock at face of his chamber.
Aug. 5	Charles Redicus,	Polish,	Miner,	32	M.	1	3	Truesdale,		Fatally injured by falling down his chamber.
5	Mike Brajinski,	Polish,	Miner,	37	M.	1	2	Truesdale,		Fatally injured by fall of rock in his chamber.
10	Otto Dudick,	German,	Coupler,	16	S.			Number 5,		Fatally injured. Squeezed between derailed car and door.

TABLE 4—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Colliery	County	Nature and Cause of Accident in Brief
Aug. 11	Ignatz Zalinski,	Polish,	Laborer,	21	S.			Number 6,		Killed by fall of rock near face of his chamber.
18	John Wallick,	Polish,	Miner,	24	M.	1	1	Wanamie,		Fatally injured by a blast while tamping it.
30	Peter Sojovage,	Lithuanian,	Laborer,	21	S.			West End,		Killed by fall of coal at face of gangway.
Sept. 3	Peter Garbera,	American,	Engineer,	26	S.					Killed by a locomotive turning over on him. Outside.
	Charles Screen,	American,	Brakeman,	17	S.			Number 6,		Screen and Rodda were fatally scalded by escaping steam from engine in above accident. (Outside).
	Elwin Rodda,	American,	Headman,	20	M.	1	1			
Oct. 18	Mike Pelychock,	Slavonian,	Brakeman,	17	S.			Number 5,		Killed by being run over by air locomotive.
23	John Vesotzski,	Polish,	Miner,	36	M.	1	5	Number 7,		Killed by fall of rock at face of his chamber.
Nov. 2	William Hoffman,	American,	Slate picker,	15	S.			West End,	Luzerne,	Killed by machinery in breaker. Outside.
2	Peter Heggiston,	Irish,	Miner,	52	M.	1	1	Number 6,		Fatally injured by fall of rock at face of his chamber.
9	John Dixon,	Polish,	Miner,	32	M.	1	2			Suffocated by smoke from fire.
9	Stanley Plitka,	Polish,	Laborer,	21	S.					Suffocated by smoke from fire.
9	Peter Prokropos,	Polish,	Laborer,	20	S.					Fatally burned by gas.
9	John Keloski,	Polish,	Miner,	29	S.					Suffocated by smoke from fire.
9	Charles Sokot,	Polish,	Laborer,	24	S.			Auchincloss,		Suffocated by smoke from fire.
9	John Gilgenast,	German,	Miner,	47	M.	1	3			Suffocated by smoke from fire.
9	Gus Brozka,	German,	Laborer,	22	S.					Suffocated by smoke from fire.
9	Anthony Kochinski,	Polish,	Miner,	57	M.	1				Suffocated by smoke from fire.
9	Charles Bozoska,	Polish,	Laborer,	33	M.	1	3			Suffocated by smoke from fire.
11	Voychik Novratzski,	Polish,	Fireman,	38	M.	1	2	Number 6,		Killed by mine cars. Outside.
29	Mathew Thorne,	English,	Brakeman,	19	S.			Bliss,		Fatally injured between car and rib.
Dec. 29	Louis Scurra,	Polish,	Laborer,	30	S.			Bliss,		Killed by fall of rock at face of his chamber.

TABLE 5.—Non-fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Colliery	County	Nature and Cause of Accident in Brief
Jan. 6	Felix Visotski,	Polish,	Miner,	37	M.	Bliss,		Compound fracture of leg by fall of rock at face of chamber while displacing a prop.
14	James Rustay,	American,	Track layer,	62	M.	West End,		Ribs and breast bone broken by fall of rock in chamber.
20	Joseph B. Markowski,	Polish,	Miner,	37	M.	Number 5,		Four fingers cut off by fall of rock at face of chamber.
20	Joseph Valetsco,	Polish,	Laborer,	40	M.	Wanamie,		Leg broken by fall of rock at face of chamber.
22	Andrew Bona,	Polish,	Laborer,	33	M.	Wanamie,		Squeezed between car and rib.
26	Louis Speronzo,	Italian,	Miner,	30	M.	West End,		Leg broken by car on chamber road.
Feb. 11	Andrew Lobeda,	Slavonian,	Miner,	37	M.	Number 2,		Back, face and hands burned by gas.
15	Mathew Marshallick,	Polish,	Miner,	43	M.	Number 5,		Face and head cut by fall of slate at face of chamber.
24	Andrew Savage,	Polish,	Laborer,	23	M.	Number 7,		Leg broken by fall of rock in chamber.
26	John Vidlofski,	Polish,	Laborer,	30	M.	West End,		Leg broken by cars.
March 2	Louis Gorograntz,	Austrian,	Miner,	28	M.	Bliss,	Luzerne,	Body injured by fall of coal at face of chamber.
3	Pasco Domne,	Italian,	Laborer,	41	M.	Number 7,		Leg broken by wheel falling on it. Outside.
24	Stanley Zenovitz,	American,	Door boy,	16	S.	Number 5,		Leg injured by plane rope rubbing against it.
27	Michael Elias,	Slavonian,	Motorman,	21	S.	Number 6,		Leg broken by being struck with latch.
April 13	Boskolisk Rosowoski,	Polish,	Fireman,	58	M.	Number 7,		Collar bone fractured. He fell off a stone wall. Outside.
15	James Powell,	American,	Spiral tender,	16	S.	Number 7,		Arm broken. He fell off platform in breaker. Outside.
20	Steve Griefski,	Polish,	Miner,	22	S.	Truesdale,		Face and hands burned by gas.
26	Adam Latuska,	Polish,	Laborer,	35	M.	Number 5,		Arm broken by timber falling on it.
28	John Budda,	Polish,	Laborer,	50	S.	Wanamie,		Knee dislocated by being hit by coal from blast.
29	William Buckshaw,	Polish,	Patcher,	16	S.	Wanamie,		Arm broken by falling from car.
May 1	Andrew Sweitufski,	Polish,	Laborer,	35	M.	Number 5,		Face, hands and body burned by gas.

TABLE 5—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Colliery	County	Nature and Cause of Accident in Brief
May 6	Leon Marconi,	Italian,	Miner,	35	M.	West End,		Arm broken and body bruised by cars. Outside.
10	Joseph Goretzski,	Polish,	Oiler,	18	S.	Number 6,		Body injured by falling from platform in breaker. Outside.
25	Joseph Lavish,	Polish,	Laborer,	23	S.	Truesdale,		Leg broken by fall of rock at face of working place.
26	Joseph Cropcheck,	Polish,	Miner,	30	M.	Wanamie,		Body injured. He fell down pitching chamber.
30	Lewis E. Jones,	English,	Engineer,	46	M.	Number 7,		Arm broken by fly wheel of engine. Outside.
July 1	Mike Tenus,	Hungarian,	Miner,	28	M.	West End,		Leg broken by fall of coal at face of working place.
1	John Kominski,	Polish,	Laborer,	24	S.	West End,		Legs and arm broken by cars on slope.
1	John Coughlin,	Irish,	Miner,	46	M.	Truesdale,		Leg fractured by fall of rock at face of gangway.
14	Daniel Shivinski,	Polish,	Laborer,	46	S.	West End,	Luzerne,	Leg broken by fall of rock at face of chamber.
26	Joseph Bavitz,	Polish,	Footman,	38	M.	Alden,		Shoulder fractured by piece of rock falling down shaft.
27	William Vetrovitch,	Polish,	Miner,	57	M.	Bliss,		Leg fractured and back injured by fall of coal at face of chamber.
28	Frank Lopinski,	Polish,	Miner,	44	M.	Number 7,		Head and leg injured by fall of rock at face of working place.
29	Peter McGady,	American,	Brattice man,	21	S.	Wanamie,		Collar bone broken by being squeezed between car and brattice.
Aug. 2	John Carapovitch,	Lithuanian,	Miner,	33	M.	Bliss,		Ankle dislocated by fall of rock at face of working place.
Sept. 3	Molgyn Edmonds,	American,	Electrician,	21	S.	Number 6,		Scalded by escaping steam from engine. Outside.
16	E. B. Bonham,	American,	Carpenter,	44	M.	West End,		Finger cut off by circle saw. Outside.
23	Bollish Vinelconti,	Polish,	Door boy,	16	S.	Number 7,		Thigh fractured. He was squeezed between derailed car and rib.

Oct.	12	Isaiah Powell,	American,	Machine helper,	17	S.	Number 7,			Arm crushed. He fell in front of his engine. Outside.
	20	George Pagorski,	Polish,	Laborer,	47	M.	Number 5,			Leg broken by cars on gangway.
	26	Peter Seletski,	Polish,	Runner,	19	S.	Number 6,			Squeezed between car and platform on gangway.
	27	Nickolas Greghead,	Russian,	Oiler,	19	S.	Number 6,			Arm broken by machinery in breaker. Outside.
Nov.	8	Mike Shikosky,	Polish,	Laborer,	25	S.	West End,			Arm broken by fall of rock at face of gangway.
	8	Casteuto Benovige,	Polish,	Miner,	31	M.	Bliss,	Luzerne,		Leg fractured by fall of rock at face of chamber.
	9	Carl Idukis,	Lithuanian,	Laborer,	20	S.	Auchincloss,			Face and hands burned by gas.
	10	John Horoshko,	Polish,	Miner,	24	M.	Number 7,			Leg broken by fall of rock at face of chamber.
	19	Steve Kanyuk,	Slavonian,	Miner,	52	M.	Number 7,			Leg broken by cars in chamber.
	23	Morris Hurley,	Irish,	Miner,	50	M.	Number 5,			Rib broken by fall of rock at face of chamber.
	26	Charles Sherman,	American,	Brakeman,	22	S.	Wanamie,			Three fingers smashed between car and engine. Outside.
Dec.	6	Renaldo Balle,	Italian,	Miner,	37	M.	Wanamie,			Rib broken by fall of rock at face of chamber.
	6	Frank Pratko,	Polish,	Miner,	38	M.	Truesdale,			Face and hands cut by flying coal from blast.
	11	Thomas Twardy,	Polish,	Laborer,	45	S.	Number 6,			Ankle broken by timber falling on him. Outside.

EXPLOSION AT AUCHINCLOSS COLLIERY

On November 9, at 2.50 in the afternoon, an explosion of gas occurred in No. 2 shaft, Auchincloss Colliery, of the Delaware, Lackawanna and Western Railroad Company, at Nanticoke, fatally burning Peter Prokropos and setting fire to the timber and coal at the face of chamber known as No. 40, which produced smoke and gas that suffocated eight other workmen, as follows: John Dixon, Stanley Plitka, John Keloski, Charles Sokot, John Gilgenast, Gus Brozka, Anthony Kochinski, Charles Bozoska, and slightly burning Carl Idukis.

The section of the mine in which the explosion occurred is known as No. 1 counter off No. 1 slope, Ross seam, and is ventilated by a separate and distinct split of air independent from all other parts of the mine and in which about 50 men are employed, but as is the custom a number of them emerged from the mine earlier in the day, among them being Mike Bolrosky, miner No. 40, in whose place the explosion is supposed to have occurred and for whom Carl Idukis, the injured man, was laboring. Bolrosky testified at the inquest, held for the purpose of inquiring into the cause of the accident, that on entering his chamber on the morning of the explosion and on leaving it at 12:20 P. M., he made an examination of his place and found it free from gas and in good condition. He also testified that he worked in this particular place, chamber No. 40, for one year and during that time he recalls only one occasion on which he found an accumulation of explosive gas. Therefore, the cause of the accumulation of gas between 12:20, the time miner No. 40 left his chamber, and 2:50, the time of the explosion, can only be conjectured.

Chamber No. 40 is driven at about a five per cent. dip off No. 1 counter and is about 400 feet long, and at the face is a very abrupt upthrow or anticlinal, in consequence of which the coal was in a laminated condition and fell away from the working face, allowing the occluded gases to readily disintegrate.

Three theories were advanced as to the cause of the explosion, all of which were plausible. The jury empaneled to investigate the cause of the accident accepted the third reason herein given.

The first theory advanced was that miner No. 47, who was driving a heading from chamber No. 47 in the direction of chamber No. 40, and whose safety lamp was found intact and in good condition hanging on the rib after the accident, neglected to examine properly for gas while he was working, and his lamp filled with gas and exploded.

The second theory was that the laborer in chamber No. 40, immediately prior to the explosion, pushed a car into the face of the workings, and it was standing on the branch in chamber No. 40, when the miner left the mines, and in passing the highest point of the chamber with the car a quantity of gas that had lodged at that point left the roof and filled the partial vacuum created by the passing car and ignited by coming in contact with the lamp of the man pushing the car.

The third theory, and the one accepted by the jury as having caused the explosion, was that the seam of coal at the face of chamber No. 40, having suddenly changed from a light dip to a pitch that is almost perpendicular and being of a laminated nature, a pocket of gas was liberated and filled the workings with fire damp at the point where the men were at work, which was ignited in some unknown manner, possibly by coming in contact with one of the workmen's lamps, or by one of the men striking a light.

The most unfortunate incident in connection with this disaster was the failure to escape of the six men who were suffocated. They were working fully a 1,000 feet from where the fire occurred and were warned to leave the mine as there was something wrong. This was evident by the filling of the workings with smoke and afterdamp, but after they had examined the air current in the workings and expressed the opinion that the trouble that existed in the portion of the mine from where the smoke was coming was but slight and would not endanger their lives, they decided to remain. They had sufficient time to reach a place of safety, had they heeded the wise warning of one of their number. They remained, however, and the workings filled with smoke and afterdamp to such an extent that escape was then impossible; the rescuing party being unable to reach them before the deadly vapors overpowered them.

At an inquest held in the town hall at Nanticoke on the 18th and 19th of November, 1909, the following verdict was rendered: "John Keloski et. al. came to their death on the 9th day of November at the Auchincloss colliery of the Delaware, Lackawanna and Western Railroad Company by being smothered in bad air after an explosion of gas in the said colliery. Eight fellow workmen lost their lives at the same time and place as a result of the explosion. The evidence shows, first, that a large rush of coal came from the face of chamber No. 40, and we believe that this rush liberated a large quantity of pent up gas and that it came in contact, in some way, with fire and exploded. Second, that all men working in this place used safety lamps only. As to how the gas was set off there has been no testimony introduced to explain. Third, we believe that the ventilation in the district where the explosion took place was all that could be desired. We therefore find that the said company was in no way responsible for the accident. Fourth, we deplore the use of spurious mine certificates and urge every effort on the part of mine officials, mine workers officials and county officials to eradicate the evil."

The following jurors rendered and signed the above verdict: Thomas Beese, Thomas Curtis, Thomas Cook, Gustav Hankey, Frank Schwartz, Joseph Elmy.

CONDITION OF COLLIERIES

SUSQUEHANNA COAL COMPANY

Number 5.—Ventilation good; drainage fair; condition as to safety good.

Number 6.—Ventilation good; drainage fair; condition as to safety good.

Number 7.—Ventilation, drainage and general condition, good.

DELAWARE, LACKAWANNA AND WESTERN RAILROAD COMPANY

Auchincloss.—Ventilation, drainage and general condition, good.

Bliss.—Ventilation, drainage and general condition good.

Truesdale.—Ventilation good; drainage fair; condition as to safety, good.

WEST END COAL COMPANY

West End.—Ventilation and drainage fair; condition as to safety, good.

LEHIGH AND WILKES-BARRE COAL COMPANY

Wanamie.—Ventilation, drainage and general condition, good.

ALDEN COAL COMPANY

Alden.—Ventilation, drainage and general condition, good.

IMPROVEMENTS

SUSQUEHANNA COAL COMPANY

No. 5 Colliery.—A new pump house was made at the foot of No. 2 shaft in which a Goyne Duplex pump, 40 x 23 x 48 inches was installed.

No. 8 tunnel, connecting No. 2 shaft with No. 4 slope, was completed.

No. 6 Colliery.—Built a concrete wash-house with four shower baths and clothes lockers.

An electric generator, operated by a 17 x 15-inch Ridgway engine was installed in the power house.

The steam locomotive used in No. 6 tunnel was replaced by a 7½ ton electric motor.

An electric hoist was installed at the top of No. 12 slope.

No. 7 Colliery.—A brick building 10 feet 9 inches by 10 feet 9 inches was erected and is known as the Draeger Rescue Station. All the necessary equipment, including 4 helmets and charging tanks, is kept in the building ready for use. The station is in charge of John B. Jones, whose duty is to visit the several mines of the company once each month and train the different corps selected for this purpose in the proper manipulation of the apparatus. The apparatus is most effective when it is worn by persons who by training have learned to have confidence in its efficiency.

A return airway 108 yards long was driven in the Cooper seam, from No. 17 plane to No. 13 tunnel level.

A return airway was driven in the Mills seam from the west gangway, No. 30 tunnel to the anticlinal, from which point it was driven

in the rock on a pitch of 60 degrees to the George seam, where it connected with the bottom of an air shaft 60 feet deep, sunk from the surface.

No. 18 and No. 19 rock planes were driven from the bottom to the Top Ross seam.

DELAWARE, LACKAWANNA AND WESTERN RAILROAD COMPANY

Auchincloss Colliery

Outside.—A new brick and concrete wash house, with expanded metal lockers, has been completed

Erection of 1,000 horse power boiler plant, enclosed in a concrete building, with feed-water regulators, pumps, governors, etc., is underway and will be completed during the early part of 1910.

One 25-foot ventilating fan and fan house for No. 1 shaft is in course of erection.

Inside.—The erection of a brick partition separating intake and return airways through No. 1 shaft will be completed during the early part of 1910.

Several new concrete and steel air bridges have been erected to improve the ventilation.

The work of sinking No. 3 slope through an anticlinal from Ross to Ross vein has been completed, and a second opening has been driven for the same.

A rock tunnel has been driven from George to Baltimore vein on the West shaft level gangway. This tunnel cut the Baltimore vein on a very heavy pitch, and the coal is giving off gas quite freely.

Bliss Colliery

Outside.—A 1,600 gallon Bronze centrifugal pump electrically operated has been installed in the breaker building for coal washing purposes.

Considerable improvements have been made in this breaker, including the installation of mechanical pickers, etc., to facilitate the handling and cleaning of coal.

A 2,000 horse power boiler plant, enclosed in a concrete building, is now under way and will be completed during the early part of 1910.

The shaft hoisting engines have been repaired by the installation of two new drums, clutch wheels, and other necessary equipments.

Inside.—Two 150 horse power electric hoists have been installed on coal slopes to replace air hoists formerly used.

Inside.—Rock tunnel from Ross to Baltimore vein on 15 degree pitch, which was nearly completed during the year 1908, was completed early in 1909.

The work of extending No. 4 tunnel from Twin to Forge vein was completed during 1909.

Rock tunnel driven from "E" gangway, Ross to Forge vein basin, is now about completed.

Extensive repairs were made to the shaft hoistways by repairing shaft timber, etc.

Trucsdale Colliery

Outside.—Installed steam hoist on the surface to operate No. 3 slope Red Ash vein, the cable being conveyed through a bore hole to the slope, which operates very successfully.

A 1,200-gallon centrifugal pump installed on the wagon road near water dam, in a brick and concrete building, to furnish water for coal washing purposes.

Rock crusher installed to pulverize the refuse coming from the breaker, so that it can be flushed into the old workings.

A new 20 x 60 concrete and brick wash-house was erected.

A brick and concrete engine house for electric hoist on No. 6 slope was also completed.

A combination lamp room, mine foreman and fire boss office, was completed during the year.

A 1,000-gallon fire pump was installed.

Brick and concrete locomotive house was erected and the original wooden building removed.

One 300 H. P. Babcock and Wilcox boiler has been added to the boiler plant.

The work of installing a 500 KW Rotary converter in Sub-station is under way. This machine will furnish power for additional locomotives that are to be installed during the year, all of which was authorized in 1909.

Inside.—Rock tunnel driven from Ross to Twin vein, No. 2 slope, Truesdale tunnel; also one short rock tunnel on 30 degrees pitch for second opening and ventilation.

New concrete and steel mule barn is under way and will soon be completed.

The following rock tunnels have been driven inside for development, second opening and ventilation purposes.

Tunnel No. 2 slope, Ross to Twin vein, 7 x 12 by 455 feet long.

Tunnel No. 1 shaft, Ross to Forge vein, 7 x 12 by 350 feet long.

No. 1 slope and airway Mills to George has been completed, 7 x 12 by 350 feet long.

Tunnel Forge to Baltimore for second opening, 7 x 12 by 150 feet long.

Tunnel No. 2 slope, Ross to Red Ash, 7 x 12 by 260 feet long.

In addition, eight concrete and steel air bridges have been erected to provide for the proper ventilation of the workings.

The following electrical operating pumps have been installed to drain the various parts of the workings:

One 800 gallon centrifugal pump.

One 300 triplex pump for 300 horse power motor.

One 700 gallon centrifugal as an auxiliary to pump at foot of shaft.

Four small 250 portable truck pumps have also been installed at various points.

LEHIGH AND WILKES-BARRE COAL COMPANY

Wanamie Colliery.—Two tunnels, one from the Baltimore to the Cooper vein, and one from the Ross to the Baltimore vein, were completed, and No. 19 tunnel was extended from Ross to Ross vein.

ALDEN COAL COMPANY

Alden Colliery.—At No. 2 shaft a concrete block wash-house 18 x 22 feet, with hot and cold water shower baths, equipped with steel lockers, was erected.

A second opening was driven through rock from Mills to George vein.

Outside slope driven to Baltimore vein, and a shaft 13 by 13 feet was driven for a second opening.

Two Webster Lane and Camp friction engines, 8½ x 12 inches, installed inside.

Two Goyne pumps, 9 x 5 x 10 inches, have been installed at Nos. 1 and 2 boiler houses for hot water feed, and one Goyne pump, 12 x 6 x 12 inches, installed in Loomis slope.



ELEVENTH DISTRICT

LUZERNE AND CARBON COUNTIES

Hazleton, Pa., February 23, 1910.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor of transmitting herewith my annual report as Inspector of Mines for the Eleventh Anthracite District, for the year ending December 31, 1909.

No examination of applicants for certificates as Mine Foremen and Assistant Mine Foremen was held during the year, owing to the failure of the Court of Luzerne county to appoint an Examining Board for that purpose.

Respectfully submitted,

DAVID J. RODERICK,
Inspector.

SUMMARY OF STATISTICS

Number of collieries,	20
Number of mines,	66
Number of mines in operation,	63
Number of tons of coal shipped to market,	3,719,265
Number of tons used at mines for steam and heat,	629,397
Number of tons sold to local trade and used by employes,	138,733
Number of tons produced,	4,487,395
Number of tons produced by compressed air machines,	.....
Number of tons produced by electrical machines,	.....
Number of persons employed inside of mines,	6,881
Number of persons employed outside,	3,427
Number of fatal accidents inside of mines,	22
Number of fatal accidents outside,	8
Number of non-fatal accidents inside of mines,	53
Number of non-fatal accidents outside,	13
Number of tons of coal produced per fatal accident inside,	203,972
Number of persons employed per fatal accident inside,	314
Number of persons employed per fatal accident outside,	428
Number of persons employed per non-fatal accident inside,	130
Number of persons employed per non-fatal accident outside,	264
Number of wives made widows,	15
Number of children made orphans,	28
Number of steam locomotives used inside of mines,	10
Number of steam locomotives used outside,	84
Number of compressed air locomotives used inside,	12
Number of compressed air locomotives used outside,	.....
Number of electric motors used inside,	9
Number of electric motors used outside,	.....
Number of fans in use,	40
Number of furnaces in use,	1
Number of gaseous mines in operation,	26
Number of non-gaseous mines in operation,	37
Number of new mines opened,	2
Number of old mines abandoned,	2

TABLE A

PRODUCTION OF COAL

Names of Operators	Tons
G. B. Markle and Company,	1,122,161
Coxe Brothers and Company, Incorporated,	596,183
Lehigh Valley Coal Company,	600,497
A. Pardee and Company,	547,738
Pardee Brothers and Company,	518,184
Harwood Coal Company,	245,410
Upper Lehigh Coal Company,	202,011
C. M. Dodson and Company,	224,950
John S. Wentz and Company,	140,485
Hazle Mountain Coal Company,	163,751
M. S. Kemmerer and Company,	95,270
Black Creek Coal Company,	16,665
Stauffer and Trezise,	8,521
Thomas R. Reese and Son,	5,569
Total,	4,487,395

Production by Counties

Luzerne,	4,380,289
Carbon,	107,106
Total,	4,487,395

TABLE B.—Fatal and non-fatal accidents inside and outside of mines; number of tons of coal produced per accident; number of persons employed; number employed per accident

Names of Operators	Fatal Accidents			Non-Fatal Accidents			Tons of coal produced per fatal accident inside	Tons of coal produced per non-fatal accident inside	Number of employes inside	Number of employes outside	Total number of employes	Number of employes inside per fatal accident	Number of employes outside per fatal accident	Number of employes inside per non-fatal accident	Number of employes outside per non-fatal accident
	Inside	Outside	Total	Inside	Outside	Total									
G. B. Markle and Co.,	8		8	12	1	13	140,270	93,513	1,448	385	1,833	181		121	385
Coxe Brothers and Co., Inc.,	2	4	6	9	2	11	298,091	66,243	908	440	1,348	454	110	101	220
Lehigh Valley Coal Co.,	3	1	4	15	2	17	200,106	40,033	1,372	526	1,898	457	526	91	263
A. Pardee and Co.,	2	2	4	2	1	3	273,869	273,869	999	491	1,490	499	245	499	491
Pardee Brothers and Co.,	3		3	5	2	7	172,728	103,637	569	317	886	190		114	159
Harwood Coal Co.,	1		1	2	2	4	245,410	122,705	378	181	559	378		189	91
Upper Lehigh Coal Co.,				1		1		202,011	104	423	527			104	
C. M. Dodson and Co.,	2		2	3	2	5	112,475	74,983	330	223	553	165		110	111
John S. Wentz and Co.,	1		1				140,485		187	118	305	187			
Hazle Mountain Coal Co.,		1	1	2	1	3		81,875	323	129	452		129	161	129
M. S. Kemmerer and Co.,				2		2		47,635	156	105	261			78	
Miscellaneous Companies,									107	89	196				
Totals and averages for district.	22	8	30	53	13	66	203,972	84,668	6,881	3,427	10,308	314	428	130	264

TABLE C.—Classification of Fatal Accidents Inside and Outside of Mines

	Months													
	January	February	March	April	May	June	July	August	September	October	November	December	Totals	Percentages
Causes of Accidents Inside														
Falls of coal,			2	1			1	1				2	7	31.82
Falls of slate,							1	1			1		3	13.64
Falls of roof,		1											1	4.54
Mine cars,				2					1		1		4	18.19
Explosions of gas,						1							1	4.54
Explosions of powder and dynamite,										1			1	4.54
Blasts, premature and otherwise,								1			1	1	3	13.64
Mules,		1					1						2	9.09
Totals,		2	2	3		1	3	3	1	1	3	3	22	100.00
Causes of Accidents Outside														
Cars,				1			1						2	25.00
Machinery,			1	2	1							1	5	62.50
Miscellaneous,			1										1	12.50
Totals,			2	3	1		1					1	8	100.00
Grand totals inside and outside,		2	4	6	1	1	4	3	1	1	3	4	30	

TABLE D.—Classification of Non-Fatal Accidents Inside and Outside of Mines

	Months													
	January	February	March	April	May	June	July	August	September	October	November	December	Totals	Percentages
Causes of Accidents Inside														
Falls of coal,			1	1	1			1		1	1	1	7	13.21
Falls of slate,	1			1						2	1		5	9.43
Falls of roof,		1											1	1.89
Mine cars,	1	1	1	1					2	1	2		9	16.98
Explosions of gas,			4							2		3	9	16.98
Explosions of powder and dynamite,			1							2			3	5.66
Blasts, premature and otherwise,	1	2	4		2	1							10	18.87
Miscellaneous,				1			2		1	3	1	1	9	16.98
Totals,	3	4	11	4	3	1	2	1	3	11	5	5	53	100.00
Causes of Accidents Outside														
Cars,	1	1	1	1		1	1					1	7	53.85
Machinery,	1												1	7.69
Miscellaneous,		1	1		1	1		1					5	38.46
Totals,	2	2	2	1	1	2	1	1				1	13	100.00
Grand totals inside and outside,	5	6	13	5	4	3	3	2	3	11	5	6	66	

TABLE E.—Occupations of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Inside													
Miners,			1	1		1	2	2	1	1	3	2	14
Miners' laborers,		1	1	1								1	4
Drivers and runners,		1					1						2
Doorboys and helpers,				1									1
Machinists,								1					1
Totals,		2	2	3		1	3	3	1	1	3	3	22
Outside													
Slatepicker bosses,												1	1
Drivers and runners,							1						1
Slatepickers (boys),				1	1								2
Laborers,				1									1
Patchers,			1										1
Jig runners,			1	1									2
Totals,			2	3	1		1					1	8
Grand totals inside and outside,		2	4	6	1	1	4	3	1	1	3	4	30

TABLE F.—Occupations of Persons Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Inside													
Assistant superintendents,			1										1
Assistant mine foremen,			1	1			1					1	4
Miners,	2	3	7	1	2	1		1	1	3	2	1	24
Miners' laborers,	1	1	2		1		1			5	2	2	15
Drivers and runners,				2					2			1	5
Doorboys and helpers,											1		1
Pumpmen,										1			1
Brattice men,										1			1
Hitchers,										1			1
Totals,	3	4	11	4	3	1	2	1	3	11	5	5	53
Outside													
Laborers,	1	2	1			1							5
Engineers and firemen,								1					1
Drivers and runners,			1	1								1	3
Patchers,						1	1						2
Screen tenders,					1								1
Ash men,	1												1
Totals,	2	2	2	1	1	2	1	1				1	13
Grand totals inside and outside,	5	6	13	5	4	3	3	2	3	11	5	6	66

TABLE G.—Nationality of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
American,			2	2			2					1	7
English,								1					1
Irish,			1			1							2
Polish,		1	1	1			1	1			1	2	8
Hungarian,											1	1	2
Italian,		1		2						1			4
Slavonian,				1	1		1		1				4
Austrian,											1		1
Russian,								1					1
Totals,		2	4	6	1	1	4	3	1	1	3	4	30

TABLE H.—Nationality of Persons Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
American,	2		3	2	2	1			3	3	2	2	20
English,			1										1
Welsh,							1						1
Irish,			1										1
German,		1		1						1			3
Polish,		2	3		1			1		3	2		12
Hungarian,	2		4			1	1	1				1	10
Italian,	1	1			1					3	1	1	8
Slavonian,				2		1	1					1	5
Lithuanian,		1								1		1	3
Austrian,		1	1										2
Totals,	5	6	13	5	4	3	3	2	3	11	5	6	66

TABLE I.—Operators and mines, kind of openings, type and size of fans, size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents and number of persons employed inside

Names of Operators and Mines	Kind of opening	Gaseous or non-gaseous	Method of ventilation	Diameter of fan in feet and inches	Width of blades in feet and inches	Depth of blades in feet and inches	Number of revolutions per minute	Water gauge developed—in inches	Name of fan	Power used	Area of furnace bars in square feet	Number of splits of air currents	Number of cubic feet of air per minute entering the mine at inlet	Total quantity of air per minute circulating in all the splits in cubic feet	Number of cubic feet per minute passing out at outlet	Number of persons employed inside
G. B. Markle and Co.																
Jeddo No. 4 Colliery:																
Jeddo No. 4,	Slope,	Gaseous,	Fan,	25	7.10	7.4	85	2.6	Guibal,	Steam,		3	82,000	60,000	116,000	286
Jeddo No. 4,	Slope,	Gaseous,	Fan,	16	5	5	78	1.1				2	39,000	20,000	50,000	54
Ebervale Colliery:																
Ebervale,	Slope,	Gaseous,	Fan,	10	3.1	2.7	100	.5	Guibal,	Steam,		1	12,000	9,000	13,000	15
Ebervale,	Slope,	Gaseous,	Fan,	16	4.6	4.7	100	1.8				7	43,000	30,000	51,000	100
Highland No. 5 Colliery:																
Highland No. 5,	Slope,	Gaseous,	Fan,	16	4.6	4.8	100	1.9	Guibal,	Steam,		1	20,000	15,200	20,300	52
Highland No. 5,	Slope,	Gaseous,	Natural,									1	28,500	17,500	29,000	81
Highland No. 5,	Slope,	Gaseous,	Fan,	16	4.5	4.8	100	1.9	Guibal,	Steam,		3	33,800	30,000	33,900	143
Highland No. 5,	Slope,	Gaseous,	Fan,	16	4.6	4.9	100	1.9	Guibal,	Steam,		4	52,000	37,300	52,200	141
Highland No. 1 Colliery:																
Highland No. 1,	Slope,	Gaseous,	Fan,	16	4.6	4.8	50	.4	Guibal,	Steam,		1	12,000	11,700	12,500	58
Highland No. 1,	Slope,	Gaseous,	Natural,									1	11,000	10,500	12,000	40
Highland No. 2 Colliery:																
Highland No. 2,	Slope,	Gaseous,	Natural,									2	31,000	29,000	32,000	142
Highland No. 2,	Slope,	Gaseous,	Fan,	[illegible]	4.10	4.10	70	.9	Guibal,	Steam,		2	20,000	19,000	21,000	90
Highland No. 6 Colliery:																
Highland No. 6,	Slope,	Non-gas.,	Fan,	16	4.6	4.9	75	1.	Guibal,	Steam,		2	30,000	20,000	34,000	75

Coxe Brothers and Co., Inc.																
Drifton No. 1 Colliery:																
Drifton No. 1,	Slope,	Non-gas.,	Fan,	16	4	4	60		Guibal,	Steam,	4	61,000	42,000	67,000	68
Drifton No. 2 Colliery:																
Drifton No. 2,	Slope,	Gaseous,	Fan,	20	4	5.6	80		Guibal,	Steam,		154,000	130,000	155,900	88
Drifton No. 2,	Slope,	Gaseous,	Fan,	17	4	4	80		Guibal,	Steam,					
Eckley, Buck Mountain and Stockton Colliery:																
Eckley No. 1,	Slope,	Non-gas.,	Natural,								1	10,000	8,000	12,000	6
Eckley No. 2,	Slope,	Non-gas.,	Natural,								2	30,000	18,000	32,000	13
Eckley No. 6,	Slope,	Non-gas.,	Fan,	20	4	5.6	80		Guibal,	Steam,	4	17,500	12,000	18,500	41
Eckley No. 10,	Slope,	Non-gas.,	Natural,								2	43,000	28,000	44,000	35
Buck Mountain,	Slope,	Non-gas.,	Natural,								1	19,500	14,200	21,000	49
Deringer, Gowen and Tomhicken Colliery:																
Deringer,	Drift,	Gaseous,	Fan,	20	6	5.6	90		Guibal,	Steam,	8	61,650	58,490	70,050	99
Gowen Nos. 1 and 3,	Tunnel,	Gaseous,	Fan,	16	4	4	100		Guibal,	Steam,	8	65,095	43,998	67,218	26
Gowen No. 4,	Slope,	Gaseous,	Fan,	20	7	6	95		Guibal,	Steam,	8	56,500	42,300	68,300	53
Tomhicken,	Drift,	Non-gas.,	Furnace,								14	2	16,700	11,000	17,800	50
Lehigh Valley Coal Co.																
Hazleton Shaft Colliery:																
Hazleton Shaft,	Shaft,	Gaseous,	Fan,	20	7	6	65	.55	Guibal,	Steam,	10	111,100	33,500	135,700	129
Hazleton No. 3,	Slope,	Gaseous,	Fan,	17	5	6	65	.50	Guibal,	Steam,	4	40,500	14,000	43,600	64
Hazleton No. 5,	Slope,	Gaseous,	Fan,	14	4.9	4	98	.50	Guibal,	Steam,	6	51,700	42,200	57,900	110
Stockton No. 2,	Slope,	Non-gas.,	Fan,	20	6.9	4.6	40	.55	Guibal,	Steam,					
Hazleton No. 1 Colliery:																
Hazleton No. 1,	Slope,	Gaseous,	Fan,	20	6	6	62	.80	Guibal,	Steam,	10	96,495	33,370	98,415	132
Hazleton No. 8,	Slope,	Gaseous,	Fan,	16	4	4.6	50	.65	Guibal,	Steam,	7	57,244	27,310	61,108	80
Spring Mountain and Spring Brook Colliery:																
Spring Brook No. 1,	Slope,	Gaseous,	Fan,	16	4	4	60	.30	Guibal,	Steam,	4	39,000	23,000	40,000	107
Spring Brook No. 2,	Slope,	Gaseous,	Fan,	14	4.9	4	70	.30	Guibal,	Steam,	4	36,000	32,500	37,000	87
Spring Mountain No. 4,	Slope,	Non-gas.,	Fan,	20	6.9	4.6	40	.55	Guibal,	Steam,	1	18,600	14,400	19,200	48
A. Pardee and Co.																
Cranberry Colliery:																
Cranberry No. 1, North,	Slope,	Gaseous,	Fan,	16	4	4	70	.9	Guibal,	Steam,	6	48,000	44,000	52,000	215
Cranberry No. 1, South,	Slope,	Gaseous,	Fan,	16	4	4.10	70	.9	Guibal,	Steam,	6	50,000	45,000	54,700	227
Cranberry No. 4,	Slope,	Gaseous,	Fan,	16	4	4.9	60	.7	Guibal,	Steam,	3	50,000	35,000	60,000	91
Cranberry No. 5,	Slope,	Gaseous,	Fan,	16	4	4.10	80	.6	Guibal,	Steam,	7	29,000	19,000	30,000	137
Cranberry No. 6,	Slope,	Non-gas.,	Fan,	16	4	4.6	70	.8	Guibal,	Steam,	6	35,800	32,000	36,000	157
East Crystal Ridge No. 5,	Slope,	Non-gas.,	Natural,												

TABLE I—Continued

Names of Operators and Mines	Kind of opening	Gaseous or non-gaseous	Method of ventilation	Diameter of fan in feet and inches	Width of blades in feet and inches	Depth of blades in feet and inches	Number of revolutions per minute	Water gauge developed—In inches	Name of fan	Power used	Area of furnace bars in square feet	Number of splits of air currents	Number of cubic feet of air per minute entering the mine at inlet	Total quantity of air per minute circulating in all the splits in cubic feet	Number of cubic feet per minute passing out at outlet	Number of persons employed inside
Pardee Brothers and Co.																
Lattimer Colliery:																
Lattimer No. 1,	Slope,	Non-gas.,	Natural,													42
Lattimer No. 3,	Slope,	Non-gas.,	Fan,	6	3.25	1.42	195	1.	Guibal,	Electricity,		1	15,000	18,000	18,000	20
Lattimer No. 8,	Slope,	Non-gas.,	Natural,									1				120
Lattimer No. 11,	Slope,	Non-gas.,	Natural,									1				83
Lattimer No. 9,	Slope,	Gaseous,	Fan,	16	4.6	4.3	95	1.5	Guibal,	Steam,		2	80,000	61,000	81,000	266
Lattimer No. 12,	Slope,	Gaseous,	Fan,	6	3.26	1.42	95	1.	Guibal,	Electricity,		2	18,000	20,000	20,000	
Harwood Coal Co.																
Harwood Colliery:																
Harwood No. 5,	Slope,	Gaseous,	Fan,	16	4.6	4.3	72	.2	Guibal,	Steam,		8	60,000	55,000	65,000	133
Harwood No. 10,	Slope,	Non-gas.,	Natural,													
Harwood No. 21,	Slope,	Non gas.,	Natural,													
Harwood No. 31,	Slope,	Non-gas.,	Natural,													
C. M. Dodson and Co.																
Beaver Brook Colliery:																
Beaver Brook No. 5,	Slope,	Non-gas.,	Natural,									2	12,000	10,000	14,000	50
Beaver Brook No. 6,	Slope,	Non-gas.,	Natural,									2	3,000	2,500	5,000	11
Beaver Brook No. 10,	Slope,	Non-gas.,	Fan,	16	4.6	5	90		Guibal,	Steam,		4	39,000	30,000	69,000	39
Beaver Brook No. 12,	Slope,	Non-gas.,	Fan,	16	4.6	5	90		Guibal,	Steam,		4	39,000	30,000	69,000	
Beaver Brook No. 11,	Slope,	Gaseous,	Fan,	16	4.6	5	90		Guibal,	Steam,		4	20,000	16,000	25,000	76
Beaver Brook No. 15,	Slope,	Gaseous,	Fan,	16	4.6	5	90		Guibal,	Steam,		4	22,000	18,000	27,070	69

John S. Wentz and Co.																
Hazle Brook Colliery:																
Hazle Brook No. 3,	Slope,	Non-gas.,	Natural,									1	23,000	12,000	24,000	40
Hazle Brook No. 5,	Slope,	Gaseous,	Natural,									2	22,000	10,000	23,000	22
Hazle Brook No. 6,	Slope,	Non-gas.,	Natural,									2	30,000	16,000	32,000	40
Hazle Brook No. 8,	Slope,	Non-gas.,	Natural,									2	20,000	14,000	22,000	40
Hazle Mountain Coal Co.																
Hazle Mountain Colliery:																
Hazle Mountain No. 1,	Slope,	Non-gas.,	Fan,	16	6	4.6	72	1.3	Guibal,	Steam,		3	48,400	33,050	50,000	150
Hazle Mountain No. 4,	Slope,	Non-gas.,	Fan,	16	4	3.11	85	1.3	Guibal,	Steam,		2	50,000	46,930	50,500	173

TABLE 1.—Operators, location of collieries, railroads, etc.

Names of Operators and Collieries	County	Name of General Superintendent	Post Office	Name of Superintendent	Post Office	Railroad to Mine
G. B. Markle and Co.						
Jeddo No. 4, Ebervale and Harleigh,	Luzerne,	W. H. Loomis, General Manager.	Jeddo,			Lehigh Valley
Highland No. 5,						
Highland Nos. 1, 2 and 6,						
Coxe Brothers and Co., Inc.						
Drifton Nos. 1 and 2,	Luzerne,	S. D. Warriner, General Manager.	Wilkes-Barre,	W. H. Davies,	Hazleton,	Lehigh Valley
Eckley, Buck Mountain and Stockton,						
Deringer, Gowen and Tomhicken,						
Lehigh Valley Coal Co.						
Hazleton Shaft,	Luzerne,	S. D. Warriner, General Manager.	Wilkes-Barre,	W. H. Davies,	Hazleton,	Lehigh Valley
Hazleton No. 1,	Luzerne,					
Spring Mountain and Spring Brook,	Luzerne, Carbon,					
Spring Brook Washery,	Carbon,					
A. Pardee and Co.						
Cranberry,	Luzerne,	Frank Pardee,	Hazleton,			Lehigh Valley
Pardee Brothers and Co.						
Lattimer,	Luzerne,	A. W. Drake,	Lattimer Mines,	George W. Barager,	Lattimer Mines,	Lehigh Valley
Harwood Coal Co.						
Harwood,	Luzerne,	A. W. Drake,	Lattimer Mines,	George W. Barager,	Lattimer Mines,	Lehigh Valley
Upper Lehigh Coal Co.						
Upper Lehigh,	Luzerne,	A. C. Leisenring,	Upper Lehigh,	James W. Shaw, Jr.,	Upper Lehigh,	C. R. R. of N. J.
C. M. Dodson and Co.						
Beaver Brook,	Luzerne,	John J. Turnbach,	Audenried,			L. V. and C. R. R. of N. J.
John S. Wentz and Co.						
Hazle Brook,	Luzerne,	T. E. Snyder,	Hazleton,	John Evans,	Hazle Brook,	Lehigh Valley

Hazle Mountain Coal Co. Hazle Mountain,	Luzerne,	W. R. McTurk,	Pennsylvania Blg., Phila.	W. A. Fuller,	Hazleton,	Lehigh Valley
M. S. Kemmerer and Co. Sandy Run,	Luzerne,	M. S. Kemmerer,	Upper Lehigh,	George D. Kugler,	Sandy Run,	C. R. R. of N. J.
Black Creek Coal Co. Harleigh,	Luzerne,	W. G. Thomas,	Hazleton,	I. D. Thomas,	Hazleton,	Lehigh Valley
Stauffer and Trezise Rowe,	Luzerne,	J. M. Stauffer,	Hazleton,	R. A. Trezise,	Beaver Meadow,	Lehigh Valley
Thomas R. Reese and Son Dusky Diamond,	Luzerne,	Thomas R. Reese,	Audenried,			Lehigh Valley

TABLE 2.—Number of tons of coal mined, number of days worked, number of persons employed, number killed and injured, quantity of powder, dynamite and so-called safety explosives used, etc.

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Explosives: Number of pounds of powder used	Explosives: Number of pounds of dynamite used	Explosives: Number of pounds of so-called safety explosives used	Number of horses and mules
G. B. Markle and Co.													
Jeddo No. 4, Ebervale and Harleigh,	Luzerne,	400,493	38,514	4,544	443,551	188	750	1	7	81,650	131,047	4,125	119
Highland No. 5,	Luzerne,	365,549	26,280	260	392,089	231	587	3	6	185,550	97,592	675	74
Highland Nos. 1, 2 and 6,	Luzerne,	237,992	43,070	5,459	286,521	226	496	4	----	46,025	86,538	4,375	75
Totals,		1,004,034	107,864	10,263	1,122,161	-----	1,833	8	13	313,225	315,177	9,175	268
Coxe Brothers and Co., Inc.													
Drifton Nos. 1 and 2,	Luzerne,	200,219	53,581	4,126	257,926	176	521	2	7	82,725	24,845	-----	60
Eckley, Buck Mountain and Stockton,	Luzerne,	121,031	27,302	497	148,830	173	338	3	----	40,150	27,435	-----	48
Deringer, Tomhicken and Gowen,	Luzerne,	148,096	34,301	7,030	189,427	177	489	1	4	68,450	32,774	-----	65
Totals,		469,346	115,184	11,653	596,183	-----	1,348	6	11	191,325	85,054	-----	173
Lehigh Valley Coal Co.													
Hazleton Shaft,	Luzerne,	108,137	54,295	1,047	163,479	125	724	1	9	69,000	61,707	-----	33
Hazleton No. 1,	Luzerne,	161,975	29,781	56,134	247,890	179	603	1	2	97,850	88,891	-----	46
Spring Mountain and Spring Brook,	Luzerne, Carbon,	94,171	55,747	4,126	154,044	164	552	2	6	73,950	32,379	-----	51
Spring Brook Washery,	Carbon,	35,019	-----	65	35,084	16	19	----	----	-----	-----	-----	-----
Totals,		399,302	139,823	61,372	600,497	-----	1,898	4	17	240,800	182,977	-----	130
A. Pardee and Co.													
Cranberry,	Luzerne,	467,762	73,785	6,191	547,738	211	1,490	4	3	219,300	191,400	-----	199

Pardee Brothers and Co.													
Lattimer,	Luzerne,	446,932	55,000	16,252	518,184	251	886	3	7	45,590	184,425		101
Harwood Coal Co.													
Harwood,	Luzerne,	196,454	36,000	12,956	245,410	233	559	1	4	24,800	85,618		62
Upper Lehigh Coal Co.													
Upper Lehigh,	Luzerne,	170,797	25,945	5,269	202,011	232	527		1	26,900	59,367		76
C. M. Dodson and Co.													
Beaver Brook,	Luzerne,	199,695	24,635	620	224,950	278	553	2	5	83,500	38,600		52
John S. Wentz and Co.													
Hazle Brook,	Luzerne,	118,458	21,152	875	140,485	215	305	1		67,500	60,750		37
Hazle Mountain Coal Co.													
Hazle Mountain,	Luzerne,	144,176	18,250	1,325	163,751	213	452	1	3	64,600	43,834		47
M. S. Kemmerer and Co.													
Sandy Run,	Luzerne,	82,606	8,274	4,390	95,270	226	261		2	13,500	19,400		25
Black Creek Coal Co.													
Harleigh,	Luzerne,	13,824	2,700	141	16,665	91	160			2,500	14,100		10
Stauffer and Trezise													
Rowe,	Luzerne,	5,471	550	2,500	8,521	259	27			5,000	500		8
Thomas R. Reese and Son													
Dusky Diamond,	Luzerne,	408	235	4,926	5,569	300	9			2,125	350		2
Grand totals,		3,719,265	629,397	138,733	4,487,395		10,308	30	66	1,300,665	1,281,552	9,175	1,190

TABLE 2. — Part 2.

Names of Operators	County	Number of Boilers					Locomotives			Number of steam engines or all classes	Total horse power	Number of pumps delivering water to surface	Capacity in gallons per minute	Quantity delivered to surface per minute—gallons	Number of electric dynamos	Number of air compressors
		Cylindrical	Horse power	Tubular	Horse power	Total horse power	Steam	Air	Electric							
G. B. Markle and Co.,	Luzerne,	----	----	57	9,420	9,420	13	6	2	97	6,201	10	11,877	11,877	3	7
Coxe Bros. and Co., Inc.,	Luzerne,	9	330	47	9,175	9,505	15	6	----	49	4,730	13	16,200	9,200	2	4
Lehigh Valley Coal Co.,	Luzerne, Carbon,	----	----	71	9,700	9,700	15	----	5	74	8,825	19	19,560	8,600	3	3
A. Pardee and Co.,		25	750	19	5,795	6,545	14	----	----	70	18,370	15	23,100	7,600	----	1
Pardee Brothers and Co.,		----	----	10	2,750	2,750	10	----	2	26	3,395	*				
Harwood Coal Co.,		----	----	12	1,800	1,800	4	----	----	29	1,325	4	4,000	3,500	1	1
Upper Lehigh Coal Co.,		50	1,610	15	2,430	4,040	8	----	----	37	1,068	9	10,750	3,700	----	1
C. M. Dodson and Co.,		4	120	23	3,330	3,450	2	----	----	18	1,200	9	12,100	5,750	1	1
John S. Wentz and Co.,	Luzerne,	----	----	12	1,850	1,850	7	----	----	17	500	7	4,570	4,570	----	1
Hazle Mountain Coal Co.,		----	----	9	1,330	1,330	4	----	----	5	450	4	3,800	1,600	----	1
M. S. Kemmerer and Co.,		6	240	2	200	440	1	----	----	10	425	1	3,000	1,000	----	----
Black Creek Coal Co.,		----	----	6	600	600	1	----	----	5	775	3	1,900	650	3	----
Stauffer and Trezise,		----	----	1	75	75	----	----	----	2	60	----	----	----	----	----
Thomas R. Reese and Son,		----	----	1	125	125	----	----	----	2	60	----	----	----	----	----
Totals,		94	3,050	285	48,580	51,630	94	12	9	441	47,384	94	110,857	58,047	13	20

*Jeddo Tunnel drainage.

TABLE 3.—Number of each class of employes inside and outside of mines

Names of Operators	County	Inside											Outside									Grand total inside and outside
		Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Doorboys and helpers	Pumpmen	Company men	All other employes	Total inside	Superintendents	Foremen	Blacksmiths and carpenters	Engineers and firemen	Slatepickers (boys)	Slatepickers (men)	Bookkeepers and clerks	All other employes	Total outside	
G. B. Markle and Co.,	Luzerne,	8	10	3	545	412	132	27	14	63	234	1,448	3	4	20	67	66	36	6	183	385	1,833
Coxe Brothers and Co., Inc.,	Luzerne,	5	14	----	470	90	105	9	8	108	99	908	----	3	34	76	42	48	11	226	440	1,348
Lehigh Valley Coal Co.,	Luzerne,	8	14	----	502	128	73	12	20	153	462	1,372	----	4	46	75	25	45	10	321	526	1,898
	Carbon,																					
A. Pardee and Co.,		7	5	7	429	310	81	47	13	51	49	999	----	2	55	59	63	35	4	273	491	1,490
Pardee Brothers and Co.,		2	12	1	294	141	41	------	------	40	38	569	1	3	22	31	30	18	9	203	317	886
Harwood Coal Co.,		1	5	1	154	117	34	------	4	27	35	378	1	2	14	30	16	6	6	106	181	559
Upper Lehigh Coal Co.,		2	2	----	49	26	12	1	4	6	2	104	1	7	8	32	76	60	4	235	423	527
C. M. Dodson and Co.,		1	3	2	112	113	21	7	5	23	43	330	1	1	21	26	27	11	4	132	223	553
John S. Wentz and Co.,	Luzerne,	1	2	----	83	42	20	8	4	27	------	187	1	4	14	24	33	2	2	38	118	305
Hazle Mountain Coal Co.,		1	2	----	145	85	27	2	4	23	34	323	1	3	11	15	35	13	3	48	129	452
M. S. Kemmerer and Co.,		1	----	----	79	54	17	------	1	4	------	156	1	1	6	11	21	43	2	20	105	261
Black Creek Coal Co.,		1	----	----	30	17	4	3	3	20	5	83	1	----	6	7	10	22	2	29	77	160
Stauffer and Trezise,		1	----	----	8	6	2	------	------	------	------	17	1	1	1	1	4	1	------	1	10	27
Thomas R. Reese and Son,		1	----	----	2	3	1	------	------	------	------	7	----	----	----	1	------	------	------	1	2	9
Totals,		40	69	14	2,902	1,544	570	116	80	545	1,001	6,881	12	35	258	455	448	340	63	1,816	3,427	10,308

TABLE 3.—Part 2

Names of Operators	County	Average Number of Days Worked in Breaker												
		January	February	March	April	May	June	July	August	September	October	November	December	Total
G. B. Markle and Co.,	Luzerne,	16	16	19	15	17	19	19	19	19	18	18	20	215
Coxe Brothers and Co., Inc.,	Luzerne,	17	12	18	19	14	14	9	5	10	12	22	23	175
Lehigh Valley Coal Co.,	Luzerne, Carbon,	12	12	18	20	11	9	7	3	9	12	21	22	156
A. Pardee and Co.,	Luzerne,	20	18	22	22	17	17	11	6	17	20	17	24	211
Pardee Brothers and Co.,	Luzerne,	21	18	22	20	21	21	21	21	22	21	22	21	251
Harwood Coal Co.,	Luzerne,	20	18	22	18	18	18	18	19	20	21	20	21	233
Upper Lehigh Coal Co.,	Luzerne,	19	18	23	18	13	16	18	21	20	21	22	23	232
C. M. Dodson and Co.,	Luzerne,	23	19	12	25	25	26	26	25	22	24	26	25	278
John S. Wentz and Co.,	Luzerne,	20	20	22	18	14	16	14	17	17	18	18	21	215
Hazle Mountain Coal Co.,	Luzerne,	21	15	23	18	13	13	3	21	20	22	23	21	213

M. S. Kemmerer and Co.,	Luzerne,	19	19	22	18	12	13	18	20	21	21	21	22	226
Black Creek Coal Co.,	Luzerne,									19	24	22	26	91
Stauffer and Trezise,	Luzerne,	24	20	24	20	22	24	23	22	22	23	14	21	259
Thomas R. Reese and Son,	Luzerne,	23	22	27	26	24	25	27	26	26	25	24	25	300

TABLE 4.—Fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Colliery	County	Nature and Cause of Accident in Brief
Feb. 4	Charles Kanetsky,	Polish,	Laborer,	37	M.	1	3	Harwood,	Luzerne,	Killed by fall of rock in gangway.
26	Atonio Diguisippi,	Italian,	Driver,	25	M.	1		Lattimer,	Luzerne,	Killed by kick from mule.
March 16	Guy Cressman,	American,	Lokie patcher,	20	S.			Hazleton No. 1,	Luzerne,	Fatally injured by being struck on head with bar. Outside.
20	Peter Maszley,	Polish,	Laborer,	22	S.			Highland No. 2,	Luzerne,	Fatally injured by fall of coal from pillar.
23	Arthur Fink,	American,	Jig runner,	20	S.			Hazle Mountain,	Luzerne,	Killed by machinery on breaker. Outside.
27	Patrick Fallon,	Irish,	Miner,	50	M.			Highland No. 5,	Luzerne,	Killed by fall of coal in cross-cut.
April 2	James Stami,	Italian,	Laborer,	30	M.	1	1	Hazleton Shaft,	Luzerne,	Killed by cars on inside slope.
19	Charles Zelahofski,	Polish,	Miner,	35	M.	1	4	Highland No. 2,	Luzerne,	Killed by fall of coal in breast.
22	Walter Gleim,	American,	Slatepicker,	15	S.			Cranberry,	Luzerne,	Killed by machinery on breaker. Outside.
24	Francis McElwee,	American,	Patcher,	16	S.			Highland No. 5,	Luzerne,	Fatally injured by falling under cars on gangway.
26	Peter Sullivan,	Italian,	Strip-laborer,	26	M.			Drifton No. 1,	Luzerne,	Fatally injured by being caught between cars on stripping. Outside.
	Peter Fusick,	Slavonian,	Jig-tender,	19	S.			Eckley,	Luzerne,	Killed by machinery under breaker. Outside.
May 1	Stephen Burko,	Slavonian,	Slatepicker,	19	S.			Eckley,	Luzerne,	Fatally injured by falling into bony coal drag line. Outside.
June 18	Edward Waters,	Irish,	Miner,	46	M.	1	3	Spring Brook,	Carbon,	Fatally burned by explosion of gas in breast.
July 12	Mike Mazaroskie,	Polish,	Miner,	39	M.	1	1	Spring Brook,	Carbon,	Killed by fall of slate in gangway.
	Con. McNamee,	American,	Driver,	20	S.			Jeddo No. 4,	Luzerne,	Fatally injured by being kicked by mule.
14	George Rose,	American,	Car runner,	26	S.			Cranberry,	Luzerne,	Fatally injured by being run over by gondola. Outside.
30	Andrew Lazor,	Slavonian,	Miner,	47	M.	1		Beaver Brook,	Luzerne,	Killed by fall of coal in gangway.
Aug. 4	William Shimshinsky,	Russian,	Miner,	40	M.	1	2	Hazle Brook,	Luzerne,	Killed by fall of coal in breast.

Aug.	7	Wassil Polokowski,	Polish,	Miner,	32	S.			Highland No. 5,	Luzerne,	Fatally injured by blast in breast.
	13	Frank George,	English,	Machinist,	43	M.	1	3	Beaver Brook,	Luzerne,	Fatally injured by fall of slate along gangway.
Sept.	30	Peter Daini,	Slavonian,	Miner,	46	M.	1	4	Lattimer,	Luzerne,	Head crushed between cross bar of car and collar on gangway.
Oct.	4	Jacob Turce,	Italian,	Miner,	38	M.	1	3	Lattimer,	Luzerne,	Instantly killed by explosion of dynamite in tunnel.
Nov.	8	Peter Misar,	Polish,	Miner,	31	S.			Cranberry,	Luzerne,	Fatally injured by fall of slate on gangway while taking out pillars.
	15	George Zoshock,	Hungarian,	Miner,	48	M.	1		Highland No. 2,	Luzerne,	Fatally injured by cars on run gangway while raising a leg into place.
	16	Peter Seriana,	Austrian,	Miner,	26	S.			Tomhicken,	Luzerne,	Fatally injured by a blast that he thought had missed fire.
Dec.	4	Balick Sunski,	Polish,	Laborer,	24	S.			Highland No. 2,	Luzerne,	Fataly injured by fall of coal while robbing pillars.
	9	Stephen Gower,	American,	Miner,	23	M.	1		Drifton No. 2,	Luzerne,	Fatally injured by blast that he thought had missed fire.
		Andrew Jacobouski,	Polish,	Miner,	54	M.	1		Cranberry,	Luzerne,	Fatally injured by fall of coal in breast.
	10	Andrew Zurko,	Hungarian,	Slatepicker, boss	37	M.	1	4	Eckley,	Luzerne,	Fatally injured in rolls on breaker. Outside.

TABLE 5.—Non-fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Colliery	County	Nature and Cause of Accident in Brief
Jan. 13	Constantine Vickerell,	Italian,	Laborer,	23	S.	Hazle Mountain,	Luzerne,	Leg fractured by car falling on him in stripping. Outside.
14	William Herrity,	American,	Miner,	42	M.	Spring Mountain,	Luzerne,	Head and face lacerated by flying coal from shot.
18	Frank Mekilta,	Hungarian,	Laborer,	21	M.	Hazle Mountain,	Luzerne,	Leg fractured by fall of slate in breast.
19	William Hasker,	American,	Ashman,	28	M.	Deringer,	Luzerne,	Leg fractured by machinery. Outside.
22	Mike Howania,	Hungarian,	Miner,	39	M.	Sandy Run,	Luzerne,	Leg and collar bone fractured by cars on gangway.
Feb. 4	Kasmer Susonowicz,	Polish,	Laborer,	58	S.	Harwood,	Luzerne,	Leg fractured by being squeezed between bumpers of cars. Outside.
5	Valentine Pass,	Polish,	Miner,	40	M.	Cranberry,	Luzerne,	Scalp and jaw lacerated by fall of rock in breast.
6	Mike Ruddy,	Lithuanian,	Miner,	43	M.	Hazleton Shaft,	Luzerne,	Head lacerated by flying coal from shot.
8	Henry Beckendahl,	German,	Laborer,	23	S.	Cranberry,	Luzerne,	Pelvis injured by being squeezed between cars at bottom of slope.
11	Mike Falakovish,	Austrian,	Miner,	29	M.	Sandy Run,	Luzerne,	Head lacerated by flying coal from shot.
19	Alfonso Seigle,	Italian,	Laborer,	42	M.	Hazleton Shaft,	Luzerne,	Leg fractured by fall of frozen clay. Outside.
March 1	Joe Rozdynski,	Polish,	Miner,	31	S.	Jeddo No. 4,	Luzerne,	Face and eyes injured by flying coal from shot.
	John Baron,	Hungarian,	Laborer,	41	M.	Deringer,	Luzerne,	Leg fractured by lever slipping and falling upon him. Outside.
9	Philip Felin,	Austrian,	Miner,	27	S.	Hazleton Shaft,	Luzerne,	Foot cut by flying coal from shot.
12	Metro Savinda,	Hungarian,	Miner,	34	M.	Highland No. 5,	Luzerne,	Head lacerated by flying coal from shot.
	Mike Shavelick,	Hungarian,	Miner,	36	M.			
15	Thomas R. Jones,	American,	Asst. supt.,	33	M.			
	John Collins,	English,	Asst. foreman,	55	M.	Drifton No. 2,	Luzerne,	Face, neck and hands burned by explosion of gas.
	James Harkins,	Irish,	Miner,	62	M.			
	Mike Prokpovitch,	Hungarian,	Miner,	45	M.			
22	Joe Augustinyak,	Polish,	Miner,	33	M.	Highland No. 5,	Luzerne,	Leg and hand burned while thawing dynamite.

Mar.	23	John Cross,	American,	Laborer,	24	S.	Hazleton Shaft,	Luzerne,	Head cut by fall of coal on gangway.
	24	Joseph Fisher,	American,	Driver,	18	S.	Beaver Brook,	Luzerne,	Leg fractured by cars. Outside.
	29	John Rodany,	Polish,	Laborer,	35	M.	Hazleton Shaft,	Luzerne,	Skull fractured by being caught between car and door frame.
April	2	Nicholas Micheal,	American,	Asst. foreman,	50	M.	Hazleton Shaft,	Luzerne,	Back sprained. Caught between roof and top of car on gangway.
	3	John Krosida,	Slavonian,	Miner,	27	M.	Beaver Brook,	Luzerne,	Head lacerated by fall of coal in breast.
	5	John Tomsho,	German,	Driver,	19	S.	Harwood,	Luzerne,	Leg fractured by fall of slate in gangway.
	26	Daniel Fisher,	American,	Driver,	19	S.	Spring Mountain,	Luzerne,	Leg fractured between prop and a rail that he was pulling.
	27	John Washko,	Slavonian,	Car runner,	25	M.	Cranberry,	Luzerne,	Arm crushed and head lacerated by railroad cars. Outside.
May	1	Anthony Carlis,	Polish,	Miner,	29	M.	Highland No. 5,	Luzerne,	Body lacerated by flying rock from hole they were charging.
		James Gallagher,	American,	Laborer,	31	M.			
	4	Henry Erbe,	American,	Miner,	48	M.	Spring Brook,	Carbon,	Arm fractured by fall of coal in breast.
	16	Nick Venerossa,	Italian,	Screen-tender,	32	M.	Hazleton Shaft,	Luzerne,	Leg fractured by falling from beam on breaker. Outside.
June	7	Joe Lashisko,	Slavonian,	Miner,	48	M.	Beaver Brook,	Luzerne,	Leg fractured by flying coal from shot.
	8	John Collesor,	Hungarian,	Laborer,	22	S.	Beaver Brook,	Luzerne,	Knee bruised between bumpers of cars. Outside.
	11	Charles Lewis,	American,	Lokie patcher,	18	S.	Lattimer,	Luzerne,	Arm fractured by falling from timber truck. Outside.
July	3	George Verbovanitz,	Slavonian,	Lokie patcher,	18	S.	Lattimer,	Luzerne,	Leg crushed by falling under cars. Outside.
	16	Joseph Williams,	Welsh,	Asst. foreman,	51	M.	Hazleton Shaft,	Luzerne,	Leg fractured by truck falling upon him on the shaft cage.
	23	John Fecsko,	Hungarian,	Laborer,	25	M.	Lattimer,	Luzerne,	Leg fractured by falling when he attempted to jump into heading.
Aug.	2	Adam Subsinski,	Polish,	Miner,	39	M.	Hazleton No. 1,	Luzerne,	Back bruised by fall of coal in breast.
	11	John Micklos,	Hungarian,	Engineer,	28	S.	Harwood,	Luzerne,	Rib fractured by falling against side of chute in breaker. Outside.
Sept.	16	Peter Welgust,	American,	Driver,	18	S.	Harleigh, Jeddo No. 4,	Luzerne,	Hip fractured by being caught between car and leg on gangway.
	27	John Kelley,	American,	Driver,	21	S.	Hazleton No. 1,	Luzerne,	Arm fractured by being caught between car and rib of gangway.
	28	Daniel Scanlon,	American,	Miner,	52	M.	Spring Mountain,	Luzerne,	Collar bone fractured by falling from chute upon a car.
Oct.	2	Andrew Lehr,	American,	Pump-man,	53	M.	Gowen No. 4,	Luzerne,	Ribs fractured by slipping and falling against steps of pump-house.
	4	Guissippe Curcio,	Italian,	Laborer,	45	M.	Lattimer,	Luzerne,	Face and arms lacerated by explosion of dynamite in tunnel.
		Frank Matz,	Italian,	Laborer,	26	S.			
		John Tomche,	Polish,	Hitcher,	18	S.	Harwood,	Luzerne,	Arm fractured by cars at bottom of plane.
	7	Charles Grudnick,	Polish,	Laborer,	32	M.	Beaver Brook,	Luzerne,	Leg fractured by fall of coal in gangway.
	9	Andrew Pepus,	Lithuanian,	Laborer,	41	M.	Hazle Mountain,	Luzerne,	Shoulder dislocated by fall of slate in breast.
	12	Charles Hagney,	American,	Brattice-man,	35	M.	Drifton No. 2,	Luzerne,	Foot injured by stepping upon a nail.

TABLE 5—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Colliery	County	Nature and Cause of Accident in Brief
Oct. 19	Nazar Cortese,	Italian,	Miner,	28	S.	Lattimer,	Luzerne,	Neck and hands burned by explosion of gas in his breast.
21	Hugh Brennan,	American,	Laborer,	22	S.	Drifton No. 2,	Luzerne,	Face burned by explosion of gas in pump-chamber.
	Fred Henry,	German,	Miner,	49	M.	Highland No. 5,	Luzerne,	Leg fractured. Prop struck him when it rolled off car.
25	Wassil Delanock,	Polish,	Miner,	48	M.	Hazleton Shaft,	Luzerne,	Leg fractured by fall of slate in gang-way.
Nov. 5	Wycheck Tomiscak,	Polish,	Miner,	24	M.	Ebervale,	Luzerne,	Thigh fractured by fall of slate in breast.
6	Patrick Sweeney,	American,	Laborer,	22	S.	Upper Lehigh,	Luzerne,	Foot injured by fall of coal from rib.
10	Paul Savage,	American,	Patcher,	18	S.	Spring Brook,	Carbon,	Arm fractured by a car becoming derailed on gangway.
22	Salvadore Papalaido,	Italian,	Laborer,	28	S.	Lattimer,	Luzerne,	Jaw bone fractured. Struck by end of fore-pole.
30	John Geritz,	Polish,	Miner,	48	S.	Drifton No. 2,	Luzerne,	Leg fractured by cars in breast.
Dec. 6	Stephen Bishop,	American,	Laborer,	16	S.	Deringer,	Luzerne,	Leg fractured by fall of coal in breast.
22	Lewis Costello,	Hungarian,	Driver,	20	S.	Spring Mountain,	Luzerne,	Internally injured by wire rope striking him in the abdomen.
23	Joseph Russel,	Italian,	Driver,	18	S.	Jeddo No. 4,	Luzerne,	Leg fractured by cars on stripping bank. Outside.
27	John Chisnell,	American,	Asst. foreman,	30	M.			
	Mike Coman,	Slavonian,	Laborer,	22	S.	Ebervale,	Luzerne,	Face, neck and hands burned by an explosion of gas.
	William Crook,	Lithuanian,	Miner,	24	M.			

CONDITION OF COLLIERIES

G. B. MARKLE AND COMPANY

Jeddo No. 4, Ebervale and Harleigh.—Ventilation good; roads and drainage good; condition as to safety good.

Highland No. 5.—Ventilation good; roads and drainage good; condition as to safety good.

Highland Nos. 1, 2 and 6.—Ventilation good; roads and drainage good; condition as to safety good.

COXE BROTHERS AND COMPANY, INCORPORATED

Drifton Nos. 1 and 2.—Ventilation good; roads and drainage good; condition as to safety good.

Eckley, Buck Mountain and Stockton.—Ventilation good; roads and drainage good; condition as to safety good.

Deringer, Gowen and Tomhicken.—Ventilation good; roads and drainage good; condition as to safety good.

LEHIGH VALLEY COAL COMPANY

Hazleton Shaft.—Ventilation good; roads and drainage good; condition as to safety good.

Hazleton No. 1.—Ventilation good; roads and drainage good; condition as to safety good.

Spring Mountain and Spring Brook.—Ventilation good; roads and drainage good; condition as to safety good.

A. PARDEE AND COMPANY

Cranberry.—Ventilation fair, roads and drainage fair; condition as to safety good.

PARDEE BROTHERS AND COMPANY

Lattimer.—Ventilation good; roads and drainage good; condition as to safety good.

HARWOOD COAL COMPANY

Harwood.—Ventilation good; roads and drainage fair; condition as to safety good.

UPPER LEHIGH COAL COMPANY

Upper Lehigh.—Ventilation good; roads and drainage good; condition as to safety good.

C. M. DODSON AND COMPANY

Beaver Brook.—Ventilation good; roads and drainage fair; condition as to safety good.

JOHN S. WENTZ AND COMPANY

Hazle Brook.—Ventilation fair; roads and drainage fair; condition as to safety good.

HAZLE MOUNTAIN COAL COMPANY

Hazle Mountain.—Ventilation good; roads and drainage fair; condition as to safety good.

M. S. KEMMERER AND COMPANY

Sandy Run.—Ventilation good; roads and drainage good; condition as to safety good.

BLACK CREEK COAL COMPANY

Harleigh..—Ventilation fair; roads and drainage fair; condition as to safety good.

STAUFFER AND TREZISE

Rowe.—Ventilation fair; roads and drainage fair; condition as to safety good.

THOMAS R. REESE AND SON

Dusky Diamond.—Ventilation good; roads and drainage fair; condition as to safety good.

Pond Creek.—Idle.

IMPROVEMENTS

G. B. MARKLE AND COMPANY

Jeddo No. 4 Colliery.—Two railroad track scales installed.

A new shaft sunk from surface to the Orchard vein, 24 feet 6 inches x 14 feet 2 inches x 138 feet deep.

Parsons system of blowers and grates installed under nine boilers, at the boiler plant.

A line of air pipe was laid from the boiler plant to Oakdale South side, for blowing two artesian wells, and the old boiler plant at south Oakdale dismantled.

Railroad track built from Jeddo No. 4 colliery to the Jeddo shops.

Two ten-ton electric locomotives for underground haulage installed, to take the place of steam locomotives.

An electric sub-station built.

Two chestnut coal jigs and two stove coal jigs installed in breaker.

A five-million gallon reservoir about two-thirds completed at Ebervale.

A 16-foot ventilating fan installed at Harleigh, and an electric motor installed for running the fan.

An electric hoist installed at Harleigh No. 1 and engine house built for housing same.

The carpenter shop at Jeddo was improved and wood working machinery installed.

Two double blocks of six-room houses and two double blocks of four-room houses, were built at Pink Ash Village.

Steam hammer, punch, and shearing machine were installed in the blacksmith shop.

Highland No. 5 Colliery.—Two railroad scales installed.

Five 300 H. P. boilers were equipped with Parson system of grates and blowers.

A new 16-foot Guibal fan and fan engine were installed, and a new compound engine was installed at what is known as Black Jeddo for running the fan. Two chestnut coal jigs installed in the breaker.

Highland No. 2 Colliery.—Two railroad track scales installed.

An 8-inch bore hole was drilled for the purpose of flushing ashes into the Buck Mountain vein to protect No. 1 slope.

Pumps located in Slope D and the water is being pumped out.

A six-and-a-half ton electric locomotive installed.

A six-inch artesian well, 400 feet deep, was drilled.

COXE BROTHERS AND COMPANY, INCORPORATED

Drifton Colliery.—No further developments were made in Slope No. 1. The inside production comes exclusively from Wharton workings developed years ago and from the George Moore Warrant, the Southern flat workings on The Black Creek Improvement Company land, which consists entirely of robbing, the lease expiring January 1, 1911.

In No. 2 slope two gangways are being driven—one on the south side, which has now reached the faulty territory, the vein pinched entirely, and the other gangway on the north side, which is in folded ground, turning around saddles and basins and gradually reaching into the Southern basin on the adjoining Beisel property, on which the Wolf Coal Company's workings are located.

The 26 and 42 x 14 x 48-inch Compound Jeanesville pump mentioned in last year's report has been installed and works entirely satisfactory. It pumps direct to the breaker and has replaced nine pumps so far. The pump room has been provided with a traveling crane and space is made for a second pump of the same dimensions as the one installed, so that finally the three pumps at No. 1 slope will be abandoned and the pumping centralized at Drifton No. 2. An old gangway is being reopened, from the face of which a plane will be driven to tap No. 6 basin, the lowest point in Drifton No. 1.

The Lattimer Stripping has been steadily advanced, three shovels being in operation; 172,651 yards were removed during the year, bringing the total to 2,849,494 yards.

A bore hole has been put down from the surface in the stripping to convey steam from the stripping boilers to a hoisting engine and pump in slope No. 2 workings, where a slope is being sunk to the bottom of the Buck Mountain basin.

Eckley Colliery.—Wharton gangways were advanced east and west. To the west the basin was reached and the West gangway is following the spoon of Slope No. 6 workings. Considerable coal has been

obtained from robbings along the flat saddle between No. 1 and No. 2 basin. Otherwise the narrow work in this colliery consisted principally in driving counters for residual mining.

While Eckley was in 1885 distinctly a water level colliery, the different drainage openings, mostly through caved ground, gradually blocked by sediment, and it became necessary during wet spells to run the breaker pump on night shifts to clear Slope No. 2 workings. Therefore a drainage tunnel was driven on 1,400-foot elevation about 200 feet long, which tapped a subterranean slope in connection with Slope No. 3 workings, lowering the water in that territory about 40-feet, thereby causing sufficient pressure to clean out all obstructions and give free exit for the water.

Strippings in the old Buck Mountain No. 6 basin have been extended—115,062 yards moved, or a total of 617,078 yards to December 31, 1909.

The uncovering of the east end of No. 1 basin was continued, 197,247 yards moved, bringing the total to 1,454,385 yards since 1886.

The underground developments are showing, as before, a large amount of coal of excellent quality remaining, but how to recover the greatest amount is still a serious problem.

Stockton Colliery.—Mining was suspended in April and since that time the gangways have been retracked, changing the gauge to 3 feet 6 inches, and repairing in general, with the intention to use an oil burning locomotive to transport all Stockton coal to the Hazleton Shaft breaker for preparation.

Tomhicken Colliery.—Little opening work was done in Buck Mountain East and Top Split of Mammoth. All work below water level was stopped, pending decision as to what power is to be installed for pumping and hoisting from lower levels. About half the coal came from Buck Mountain mining and robbing on the flat saddle, south side of basin.

Since September 15 the coal is dumped into railroad cars and taken to Hazleton Shaft colliery for preparation.

Deringer Colliery.—Gangways in the different sections of the mine were continued and the Gowen No. 4 workings connected by a tunnel on 2nd level. The use of the air motors was extended, which now bring the Gowen No. 4 coal on 3rd lift direct to the Deringer underground shafts, saving about two miles inside and outside transportation and about three-quarter mile steep runs, replacing about eighteen mules.

Two thousand four hundred feet of 2-inch gas pipe was replaced with 3-inch wood pipe for fresh water supply between Fern Glen and Gowen No. 4.

Six thousand feet of 6-inch steam line was erected between Deringer boiler house and Gowen slope No. 4, and the Gowen No. 4 boiler plant abandoned. This was made possible by shutting down the Deringer breaker and moving the run of mine to Hazleton Shaft breaker in railroad cars for preparation.

An artesian well is being sunk in the valley north of Deringer, which is expected to help over the drought in the future.

The west fan at Gowen north tunnel was shifted further west to top of Slope No. 3, which brings it closer to the live workings.

All gangways are being continued in fair coal and the present production can be well maintained.

LEHIGH VALLEY COAL COMPANY

Hazleton No. 1 Colliery.—Hazleton No. 8 slope has been connected with the plane hoist direct, which saves the complicated and expensive handling of surface coal from No. 8 slope (Old), east of Slope No. 1.

An ash conveyor was constructed to facilitate the handling of ashes from the boiler house.

A rock hole, 63 feet long, was driven from East Primrose to East Orchard on the 5th lift to facilitate the handling of coal.

A tunnel, 175 feet long, was driven to the Parlor vein, 5th lift, west, also making accessible a secondary basin in the Wharton.

Strippings at No. 6 workings have been continued—50,688 yards moved, or a total of 435,831 yards to date.

Robbings east and west of Slope No. 1 in Mammoth vein, in east spoon end of Tracy and on the west side of the North Dip Buck Mountain vein furnished a large portion of the production.

Hazleton Shaft Colliery.—The breaker was thoroughly remodeled to take care of a larger production, as Deringer, Tomhicken and Stockton coal is now prepared at this Breaker. The drag hoist on north and south side of the breaker has been abandoned and all inside coal from the shaft, the outside coal from Stockton and the coal brought in railroad cars from the western collieries of Coxe Brothers and Company, Inc., is being dumped in a pocket and hoisted in gun-boats to the top of the breaker. This naturally necessitated extensive changes in the breaker and outside for mine and railroad tracks.

The electric haulage mentioned in the 1908 report has been extended, for which over 13,000 feet of wire were installed, and the mine cable taken over the surface to a bore hole, that was sunk for this purpose, and through it into the mines.

A rock crusher and a rock conveyor were installed to handle the mine slate, which is being dumped on the north side of the breaker.

A hoisting engine was installed on the old gravity plane in the Wharton, east of Slope No. 2, over which the coal is now hoisted from the Diamond section.

The new pumping plant, of which note was made in last year's report, is progressing. The East Gamma gangway, which will act as a drainage level for the Diamond section and for Stockton ultimately, has passed the first Diamond slope. A tunnel is being driven to the South nearly on slope line and by diamond drill holes the exact location of the Wharton and Mammoth vein determined, so that the tunnel can be safely advanced to the Wharton, from where the body of water will be tapped by 4-inch drill holes. When the water is being lowered in the Diamond section it will at the same time be gradually drawn off from the Stockton side, so that no greater pressure will lie against the boundary pillar than adjudged to be safe by the arbitration proceedings instituted by the Mine Inspector in 1896.

This water question is directly connected with the fire question on the south side of the basin. The Company has gone to great expense during the year to settle definitely to what extent the fire extended from the No. 8 slate banks to the mine workings. Drill holes were put in the fire section and thermometer readings taken by the driller every twenty-four hours, showing a high tem

perature compared with normal inside, but not high enough to suspect actual fire. Several rock holes were driven and connected by cross holes, following the bottom and top rock, and in a few instances smoldering fire in old timbers thrown in cave holes was detected and quickly extinguished, and all the inconvenience the men met with was a somewhat higher temperature, especially along the bottom, rarely along the top rock. These test holes were driven east into the pump-way along Stockton No. 8 slope and into the Wharton manway east of the slope. No fire was encountered and only the rock showed the effect of the heat.

The long tunnel on line of Stockton Slope No. 2 is being extended to the south and has penetrated the Primrose without encountering great heat or fire, as it was feared that the No. 8 slope fire had communicated with the Primrose. Since this question is settled, the water will be attacked vigorously and the submerged Stockton colliery once more cleared.

Spring Mountain Colliery.—The new breaker has been finished and Oneida coal is being prepared at this breaker, furnishing about sixty per cent. of the production—Spring Mountain and Spring Brook furnished the other 40 per cent.

Grading of breaker slope has been completed, and with the assistance of an empty car plane the bottom is made self-acting. To keep the gun-boat pit clear of water a pumpway and sump was driven in the Buck Mountain, connected by a short tunnel with the pit.

The boundary slope along the west line of the Jeanesville property, which was mentioned in last year's report, is almost ready for operation. The hoisting engine is located on the surface and the rope carried through a bore hole to top of slope.

A strong concrete dam was built on the east side of Slope No. 7 and two plank dams on the west, which are storing the wash water for the breaker and will act as reservoir when, on account of rain or thaw, the influx in the old No. 1 Slope workings is in excess of the pumping capacity.

A concrete hospital and concrete stable have been built, and with the grading of the Tender slope the pump house at bottom of slope will be remodeled, reducing fire risk to a minimum.

An oil burning locomotive has been procured and no trouble is experienced from its vapors.

A 20-foot fan, in concrete and brick building, has been put into service.

An ash conveyor was erected to take care of the boiler ashes on the west side of the boiler house.

A thorough system of pipe lines and fire hydrants has been installed for protection.

The strippings have been continued, 90,389 yards having been moved by one shovel under difficult conditions; 120,173 yards were removed since the new stripping contract was let. The strippings necessitated the changing of the 8-inch steam line to Spring Brook and the abondonment of the Tamaqua, Hazleton and Northern Railway, a branch of the Reading.

Spring Brook Colliery.—Gangways were continued and bottom arrangements completed for the boundary slope, mentioned under

Spring Mountain improvements. A fire-proof hospital was constructed, and connection was made by a travelling-way between Slope Nos. 1 and 2, which at the same time furnished a second outlet.

Grades of the old Beaver Meadow Branch were changed to shift cars by gravity under the dump from which Spring Brook coal is at present loaded into railroad cars, on which it is taken to Spring Mountain for preparation, while the Spring Brook breaker has been converted into a washery, through which the slate banks on the New York and Lehigh Coal Company land will be handled. A steam shovel will be furnished to facilitate the loading.

Spring Brook houses were thoroughly repaired and painted during the year.

PARDEE BROTHERS AND COMPANY, INCORPORATED

Lattimer Colliery.—A tunnel has been driven north from the West Buck Mountain gangway slope No. 12, a distance of 140 feet to the Alpha vein, and a gangway is being driven west to connect with Slope "B" of the The Jeddo Tunnel Company, for drainage purposes.

A 75-foot tunnel has been driven from the West Buck Mountain gangway to connect with the West Gamma gangway slope No. 12, to complete the air-circuit.

A 90-foot tunnel has been driven north from the West Gamma gangway on the south dip from the Back basin, to the Alpha vein, and a gangway is being driven west, which will be connected by tunnel to Slope No. 22.

A 75-foot tunnel has been driven north through the anticlinal from the west Gamma gangway south dip slope No. 9, which cut the Gamma and Mammoth veins on the north dip.

A new 7 x 11-foot slope, No. 23, has been sunk on the south dip of the Holmes vein, 1,600 feet west of Slope No. 12, a distance of 140 feet on an average dip of 45 degrees, and a tunnel 25 feet long driven south to the Primrose vein.

A new 7 x 11 foot slope, No. 24, has been sunk on the north dip of the Wharton vein, near the eastern line of the property, a distance of 500 feet on an average dip of 18 degrees.

Two tunnels have been driven south from the East Gamma gangway slope No. 2, a distance of 40 feet to the Mammoth vein.

A 40-foot tunnel has been driven north from the East Gamma gangway slope No. 9 to the Mammoth vein at the foot of Slope No. 1.

A rock hole has been driven through the top rock in breast No. 75, on the east Gamma gangway slope No. 2, to tap the Wharton vein.

A new conveyor line has been constructed and placed in operation at No. 4 Breaker to convey the refuse from the breaker north across the canal to the place of deposit, which replaces the old plane and hoisting plant that has been in operation.

Two new hoisting plants have been installed and engine houses erected, one at the head of slope No. 23, the other at the head of Slope No. 24.

A new 4-inch steam line has been constructed from Slope No. 13 engine house east along the north side of the canal, for a distance of 2,000 feet, to the engine installed at the head of Slope No. 24.

A steam driven fan (42 inches) has been installed over the airway that was driven to the surface from breast No. 35 on the West Buck Mountain gangway Slope No. 2.

The locomotive road along the south side of the basin to the eastern boundary line, thence across the barrier pillar to the north side of the basin, has been extended 2,000 feet during the year. This track is to be extended to Slopes Nos. 12 and 22, thus replacing all tracks that now cross the basin where mining is in progress.

A garage, 24 feet x 36 feet, has been constructed south of the Casino, for housing the Company automobiles purchased during the year.

Milnesville.—A 60-foot tunnel has been driven north from the West Counter gangway Gamma vein north dip slope No. 7 to the Wharton vein.

The south tunnel near the bottom of slope No. 7 has been extended 125 feet.

The south tunnel near the foot of Slope No. 17 has been extended 125 feet. This tunnel will be extended south about 40 feet more to the site of the proposed shaft, which will be driven from this point to the surface and also extended to the lower lift; said shaft to be operated throughout by electricity supplied by the Harwood Electric Company.

A locomotive road has been built from the present road east of the turnpike at Milnesville, west for a distance of 2,500 feet to the slate banks at Holywood, where a steam shovel has been installed to load the slate, which is hauled in mine cars to the No. 3 washery.

The water in the No. 2 basin at Holywood has been lowered from an elevation of 1529.0 to an elevation of 1448.0 or 81 feet, while that in No. 1 basin has been lowered from an elevation of 1534.0 to an elevation of 1513.0 or 21 feet, during the year.

An airway 4 feet x 24 feet x 200 feet long has been driven to the surface from breast No. 25 off the west counter gangway in the Gamma vein, and a motor-driven fan installed.

HARWOOD COAL COMPANY

Harwood Colliery.—A tunnel has been driven south from the East gangway Wharton vein South Dip Slope No. 8, a distance of 50 feet, to the Parlor vein.

A 125 foot tunnel has been driven north from the Gamma to the Wharton vein, north dip on the sixth level Slope No. 5.

A new slope, 6 feet x 11 feet x 200 feet long, has been sunk on the north dip of the Wharton vein, along Humboldt Road, and an electric hoist installed and new engine house erected.

The Four Foot slope has been extended 600 feet.

Several small slopes have been sunk along the outcrop of the Wharton and Parlor veins on the south side of the basin to facilitate the mining of the outcrop coal.

A new slope, 6 feet x 11 feet x 60 feet long, has been sunk on the south dip of the Buck Mountain vein, Back basin, and gangways driven east and west along the face of the old breasts to mine the outcrop coal.

A slope 6 feet x 11 feet has been sunk in the Gamma vein No. 19 basin on the south dip, a distance of 85 feet on a dip of 30 degrees.

A hospital building 12 feet x 14 feet has been erected at No. 1.

UPPER LEHIGH COAL COMPANY

Upper Lehigh Colliery.—No. 1 plane on the north side of breaker and No. 2 plane on the south side of breaker were rebuilt during the

year; and a new pumphouse over the breaker pump erected. A 12 x 15-inch Worthington pump was installed at breaker for fire purposes, and to give sufficient water for new lip screen for loading coal into big cars for shipment.

Installed one set of 36-inch rolls 48 inches in diameter; two single deck shakers for stove and chestnut sizes; four Ayers pickers, and four Farrer or Scranton pickers. The drag line at No. 2 bank washery was extended 200 feet to the west and 100 feet to the east.

The old No. 4 slope workings were reopened about 500 feet east of the original slope to reclaim some pillar coal.

A channel 2,500 feet in length was excavated on the south side of basin for surface drainage.

A dam was constructed across the basin about 2,500 feet west of the eastern end of property.

A steam hammer was installed in the blacksmith shop.

There were five steam shovels at work during the year, which removed 592,801 cubic yards of material.

C. M. DODSON AND COMPANY

Beaver Brook Colliery—Slope No. 6.—A 70-foot tunnel was driven from the Wharton vein on the south dip through fault in the basin, to the Wharton vein on the north dip.

Slope No. 15.—An 80-foot tunnel was driven from the Buck Mountain vein to the Gamma vein; also a 100-foot tunnel driven from the Buck Mountain vein to the Lykens vein.

On February 22, the old breaker that had stood for many years was destroyed by fire.

A washery, which stands a short distance west of the old breaker and which was not damaged by the fire, was pressed into service by placing a set of rolls near bottom of the scraper line to break the coal before elevating it on the washery. This served the purpose very well, and in about three weeks they were shipping coal. A loss in tonnage was thus avoided to a considerable extent.

A new breaker has been erected 300 feet east of the location of the old breaker to conform with the Mine Law. It is equipped with the most modern machinery, having a capacity of 1,500 tons per day.

A new pair of 22 x 36-inch geared hoisting engines have been installed at No. 11 slope to take the place of the old engines, which were damaged by the fire.

A compound duplex pump has been installed, 18 x 29 inches x 17 x 48 inches, for pumping wash water on the breaker.

Installed a pair of 16 x 30-inch hoisting engines for hoisting the coal from surface to top of breaker.

Installed a pair of 18 x 36-inch breaker engines, and one 8 x 10-inch engine for the empty car hoist.

An artesian well was drilled to a depth of 329 feet when a good flow of water was reached, producing 250 gallons per minute.

JOHN S. WENTZ AND COMPANY

Hazle-Brook Colliery.—A new air compressor has been installed.

Five thousand feet of 2½ inch water pipe has been laid to furnish the boilers and dwellings with fresh water.

A washery has been erected to run the banks through that lie west of the breaker.

The No. 3 slope is being sunk to the basin of the No. 2 vein.

A new slope, 17 x 9 x 100 feet, is being sunk near the western end of property to work the No. 4 vein.

In No. 5 slope a tunnel 95 feet long has been driven from the basin of No. 3 vein to the south dip of the No. 2 vein.

HAZLE MOUNTAIN COAL COMPANY

Hazle Mountain Colliery.—An 8-inch artesian well was drilled 383 feet deep and a good supply of water struck at this point. A 30,000 gallon reservoir was excavated for storing the water from this bore hole. The water is forced by compressed air. A pipe line 1,700 feet long was laid for conveying water to the boiler house.

A locomotive house was built to replace the one destroyed by fire. A 39-ton 14 x 20 Vulcan locomotive was installed to haul the coal from No. 5 slope to the breaker, supplanting two small locomotives formerly used on this run, which is four and a half miles long.

A self-feeder installed to regulate the feed of unprepared coal to breaker.

The old No. 2 slope workings have been cleaned up, and 500 feet of the old gangway re-timbered.

A tunnel 60 feet in length has been driven from the Wharton vein to the Gamma vein, and gangways have been started.

An inside slope, 7 x 12 x 60 feet long, started last year, has been finished, and a hoisting engine installed, which is run by compressed air.

A tunnel, 208 feet, is being driven in No. 1 slope from the Wharton vein to the Gamma and Buck Mountain veins on the south side of basin.

At the No. 5 slope a rock chute was driven from the lower vein to the next vein above, a distance of 39 feet on a pitch of 35 degrees.

BLACK CREEK COAL COMPANY

Harleigh Colliery.—A new breaker has been erected with a capacity of 800 tons per day

Installed two 150 horse power Vulcan return tubular boilers.

Erected a combined blacksmith and carpenter shop.

Installed one 3-stage turbine electrically driven pump with a capacity of 900 gallons per minute; also 600 feet of 6-inch wood lined column pipe from pump to surface in the Buck Mountain slope; also one 2-stage electric turbine pump with a capacity of 700 gallons per minute in Wharton vein. Erected transformer house and installed three 75 K. W. transformers.

Constructed 7,600 feet of railroad from the breaker to the spear point slopes, gauge three feet.

One thousand five hundred feet of 6-inch and 8-inch wood water pipe line from the Wharton manway to the breaker to carry wash water to the breaker.

The rolling stock was increased by the addition of 50 mine cars.

A new Vulcan locomotive of the saddle tank type was installed to haul the coal from the spear point slopes to the breaker; cylinders 12 x 16 inches.

Installed one 100 H. P. electric hoist at the Buck Mountain slope; also one 100 H. P. electric hoist at the spear point property.

Installed an 8-foot fan, which can be used either as an exhaust or blower, driven by a 30 H. P. electric motor. This fan ventilates the Wharton and Primrose slopes.

Erected engine house 22 x 50 feet at the Buck Mountain slope, and engine house 18 x 22 feet at spear point.

The West Buck Mountain gangway on the first lift has advanced 1,500 feet and the West Buck Mountain gangway on the second lift has advanced 900 feet.

A rock tunnel was driven from the Buck Mountain vein to the Gamma vein a distance of 62 feet, for ventilation.

A new pump house, 18 x 30 feet, was excavated on the east side of the Buck Mountain slope at the bottom.

An airway 3 x 14 feet and 173 feet long was driven from the first lift in the Buck Mountain slope to the surface.



TWELFTH DISTRICT

SCHUYLKILL COUNTY

Mahanoy City, Pa., February 18, 1910.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor of transmitting herewith my annual report as Inspector of Mines for the Twelfth Anthracite District, for the year ending December 31, 1909.

The report contains the statistics relative to production, number of days worked, employes, accidents, and the condition of the collieries.

Respectfully submitted,

P. C. FENTON,
Inspector.

SUMMARY OF STATISTICS

Number of collieries,	9
Number of mines,	15
Number of mines in operation,	15
Number of tons of coal shipped to market,	2,324,905
Number of tons used at mines for steam and heat,	300,026
Number of tons sold to local trade and used by employes,	47,584
Number of tons produced,	2,672,515
Number of tons produced by compressed air machines,	.....
Number of tons produced by electrical machines,	.....
Number of persons employed inside of mines,	4,948
Number of persons employed outside,	2,490
Number of fatal accidents inside of mines,	18
Number of fatal accidents outside,	2
Number of non-fatal accidents inside of mines,	17
Number of non-fatal accidents outside,	3
Number of tons of coal produced per fatal accident inside,	148,473
Number of persons employed per fatal accident inside,	275
Number of persons employed per fatal accident outside,	1,245
Number of persons employed per non-fatal accident inside,	291
Number of persons employed per non-fatal accident outside,	830
Number of wives made widows,	11
Number of children made orphans,	30
Number of steam locomotives used inside of mines,	.....
Number of steam locomotives used outside,	13
Number of compressed air locomotives used inside,	.....
Number of compressed air locomotives used outside,	13
Number of electric motors used inside,	.....
Number of electric motors used outside,	4
Number of fans in use,	15
Number of furnaces in use,	.....
Number of gaseous mines in operation,	15
Number of non-gaseous mines in operation,	.....
Number of new mines opened,	.....
Number of old mines abandoned,	.....

TABLE A

PRODUCTION OF COAL

Names of Operators	Tons
Philadelphia and Reading Coal and Iron Company,	2,248,964
Lentz Coal Company,	271,874
Lehigh Valley Coal Company,	151,677
Total,	2,672,515

Production by Counties

Schuylkill,	2,672,515

TABLE B.—Fatal and non-fatal accidents inside and outside of mines; number of tons of coal produced per accident; number of persons employed; number employed per accident

Names of Operators	Fatal Accidents			Non-Fatal Accidents			Tons of coal produced per fatal accident inside	Tons of coal produced per non-fatal accident inside	Number of employes inside	Number of employes outside	Total number of employes	Number of employes inside per fatal accident	Number of employes outside per fatal accident	Number of employes inside per non-fatal accident	Number of employes outside per non-fatal accident
	Inside	Outside	Total	Inside	Outside	Total									
Philadelphia and Reading Coal and Iron Co.,	17	2	19	15	3	18	132,292	149,931	4,116	1,999	6,115	242	999	274	666
Lentz Coal Co.,	.....	.....	.....	2	.....	2	.....	135,937	549	322	871	.....	.....	274	.....
Lehigh Valley Coal Co.,	1	.....	1	.....	.....	.....	151,677	.....	283	169	452	283	.....	.....	.....
Totals and averages for district,	18	2	20	17	3	20	148,473	157,207	4,948	2,490	7,438	275	1,245	291	830

TABLE C.—Classification of Fatal Accidents Inside and Outside of Mines

	Months													
	January	February	March	April	May	June	July	August	September	October	November	December	Totals	Percentages
Causes of Accidents Inside														
Falls of coal,	1	1	1			1							4	22.22
Falls of roof,							1						1	5.55
Mine cars,			1					1					2	11.11
Explosions of gas,											1		1	5.56
Suffocation by gas, etc.,		1											1	5.56
Explosions of powder and dynamite,				1	1				1				3	16.66
Blasts, premature and otherwise,				1							1		2	11.11
Falling into slopes, etc.,			1		1								2	11.11
Crushed at batteries,			1										1	5.56
Miscellaneous,										1			1	5.56
Totals,	1	2	4	2	2	1	1	1	1	1	2		18	100.00
Causes of Accidents Outside														
Machinery,	1												1	50.00
Miscellaneous,										1			1	50.00
Totals,	1									1			2	100.00
Grand totals inside and outside,	2	2	4	2	2	1	1	1	1	2	2		20	

TABLE D.—Classification of Non-Fatal Accidents Inside and Outside of Mines

	Months													
	January	February	March	April	May	June	July	August	September	October	November	December	Totals	Percentages
Causes of Accidents Inside														
Falls of coal,	1		2	1									4	23.53
Falls of slate,			1							1			2	11.77
Mine cars,		2				1							3	17.64
Explosions of gas,	3								1		1		5	29.41
Explosions of powder and dynamite,		1											1	5.88
Blasts, premature and otherwise,			1			1							2	11.77
Totals,	4	3	4	1		2			1	1	1		17	100.00
Causes of Accidents Outside														
Cars,	1				1						1		3	100.00
Totals,	1				1						1		3	100.00
Grand totals inside and outside,	5	3	4	1	1	2			1	1	2		20	

TABLE E.—Occupations of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Inside													
Fire bosses and assistants,					1								1
Miners,	1	1	4	2		1	1	1	1	1	2		15
Miners' laborers,		1											1
Starters,					1								1
Totals,	1	2	4	2	2	1	1	1	1	1	2		18
Outside													
Repairmen,										1			1
Laborers,	1												1
Totals,	1									1			2
Grand totals inside and outside,	2	2	4	2	2	1	1	1	1	2	2		20

TABLE F.—Occupations of Persons Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Inside													
Miners,	3		3	1		2			1		1		11
Miners' laborers,	1	1	1										3
Drivers and runners,		2											2
Timbermen,										1			1
Totals,	4	3	4	1		2			1	1	1		17
Outside													
Topmen,	1												1
Laborers,					1						1		2
Totals,	1				1						1		3
Grand totals inside and outside,	5	3	4	1	1	2			1	1	2		20

TABLE G.—Nationality of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
American,	1												1
English,					1								1
Irish,				1									1
Polish,	1	2	2						1	1	2		9
Italian,							1						1
Slavonian,				1									1
Lithuanian,			2		1	1		1					5
Russian,										1			1
Totals,	2	2	4	2	2	1	1	1	1	2	2		20

TABLE H.—Nationality of Persons Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
American,	1										2		3
English,		1											1
German,	1												1
Polish,			1	1	1	1							4
Slavonian,	1	1											2
Lithuanian,	2	1	3			1			1				8
French,										1			1
Totals,	5	3	4	1	1	2			1	1	2		20

TABLE I.—Operators and mines, kind of openings, type and size of fans, size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents and number of persons employed inside

Names of Operators and Mines	Kind of opening	Gaseous or non-gaseous	Method of ventilation	Diameter of fan in feet and inches	Width of blades in feet and inches	Depth of blades in feet and inches	Number of revolutions per minute	Water gauge developed—in inches	Name of fan	Power used	Number of splits of air currents	Number of cubic feet of air per minute entering the mine at inlet	Total quantity of air per minute circulating in all the splits in cubic feet	Number of cubic feet per minute passing out at outlet	Number of persons employed inside
Philadelphia and Reading Coal and Iron Co.															
Ellangowan Colliery:															
Ellangowan,	Slope,	Gaseous,	Fan,	20	6.6	6	80	1.4	Guibal,	Steam,	9	49,593	30,855	50,335	105
Ellangowan,	Shaft,			15	7	6.6	72	.5			8	51,763	43,300	52,141	141
St. Nicholas Colliery:															
St. Nicholas,	Slope,	Gaseous,	Fan,	21	7	6.6	90	2.4	Guibal,	Steam,	10	42,060	53,480	42,230	241
Suffolk Colliery:															
Suffolk,	Slope,	Gaseous,	Fan,	18	6.6	5.6	60	1.4	Guibal,	Steam,	8	57,744	34,228	58,508	115
Suffolk,	Slope,			18	6.6	5.6	60	1.4			9	50,444	36,815	51,340	80
Maple Hill Colliery:															
Maple Hill,	Shaft,	Gaseous,	Fan,	21	7	6.6	75	1.7	Guibal,	Steam,	10	90,707	60,390	93,687	312
Maple Hill,	Shaft,			21	7	6.6	75	1.7			9	88,450	57,010	89,440	349
Tunnel Ridge Colliery:															
Tunnel Ridge,	Slope,	Gaseous,	Fan,	21	7	6.3	75	2.0	Guibal,	Steam,	8	143,347	103,779	153,855	300
Mahanoy City Colliery:															
Mahanoy City,	Slope,	Gaseous,	Fan,	21	7	6.6	86	2.0	Guibal,	Steam,	7	91,810	67,804	95,280	290

North Mahanoy Colliery:																
North Mahanoy,	Slope,	---	Gaseous,	Fan,	21	7.6	6.3	78	1.1	Guibal,	--	Steam,	9	126,820	102,642	130,980	430
Lentz Coal Co.																	
Park No. 2 Colliery:																	
Park No. 1,	Slope,	---	Gaseous,	Fan,	16	4	4.5	90	1.5	Guibal,	--	Steam,	6	85,678	56,789	88,345	195
Park No. 2,	Slope,	---			14	4	4	90	1.3				7	86,000	72,000	95,546	200
Park No. 3,	Slope,	---			16	5.4	4.5	85	1.5				6	75,542	57,890	78,456	180
Park No. 4,	Slope,	---															
Lehigh Valley Coal Co.																	
Primrose Colliery:																	
Primrose,	Slope,	---	Gaseous,	Fan,	10	4.4	4.3	90	1	Guibal,	--	Steam,	7	39,000	28,000	40,000	180
					16	4	4.6	100	1.5				8	50,500	48,900	58,900	200

TABLE 1.—Operators, location of collieries, railroads, etc.

Names of Operators and Collieries	County	Name of General Superintendent	Post Office	Name of Superintendent	Post Office	Railroad to Mine
Philadelphia and Reading Coal and Iron Co						
Ellangowan,						
St. Nicholas,						
Suffolk,						
Maple Hill,	Schuylkill,	W. J. Richards,	Pottsville,	Reese Tasker,	Pottsville,	P. and R.
Tunnel Ridge,						
Mahanoy City,						
North Mahanoy,						
Lentz Coal Co.						
Park No. 2,	Schuylkill,	James L. Reese,	Park Place,	James L. Reese,	Park Place,	Lehigh Valley
Lehigh Valley Coal Co.						
Primrose,	Schuylkill,	S. D. Warriner,	Wilkes-Barre,	J. M. Humphrey,	Centralia,	Lehigh Valley

TABLE 2.—Number of tons of coal mined, number of days worked, number of persons employed, number killed and injured, quantity of powder, dynamite and so-called safety explosives used, etc.

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Explosives			Number of horses and mules
										Number of pounds of powder used	Number of pounds of dynamite used	Number of pounds of so-called safety explosives used	
Philadelphia and Reading Coal and Iron Co.													
Ellangowan,	Schuylkill,	506,609	42,038	637	349,284	190	984	4	1	229,075	50,774	185	74
St. Nicholas,		286,421	33,892	310	320,623	216	737	3	1	136,875	72,751	----------	59
Suffolk,		241,846	20,942	1,321	264,109	216	817	2	5	140,625	31,113	----------	69
Maple Hill,		568,269	34,020	9	602,338	212	1,456	6	4	364,300	64,483	2,550	75
Tunnel Ridge,		146,160	45,776	----------	191,936	213	645	2	----	62,075	49,525	2,963	57
Mahanoy City,		235,489	28,748	36,733	300,970	269	671	1	6	141,300	27,221	198	77
North Mahanoy,		180,046	35,261	33,897	219,204	161	805	1	1	76,475	22,189	----------	27
Totals,		1,964,780	241,277	42,907	2,248,964	------	6,115	19	18	1,150,725	318,056	5,896	438
Lentz Coal Co.													
Park No. 2,	Schuylkill,	235,582	33,982	2,310	271,874	200	871	----	2	168,900	56,625	----------	90
Lehigh Valley Coal Co.													
Primrose,	Schuylkill,	124,543	24,767	2,367	151,677	191	452	1	----	72,200	22,764	----------	44
Grand Totals,		2,324,905	300,026	47,584	2,672,515	------	7,438	20	20	1,391,825	397,445	5,896	572

TABLE 2.—Part 2.

Names of Operators	County	Number of Boilers					Locomotives			Number of steam engines of all classes	Total horse power	Number of pumps delivering water to surface	Capacity in gallons per minute	Quantity delivered to surface per minute—gallons	Number of electric dynamos	Number of air compressors
		Cylindrical	Horse power	Tubular	Horse power	Total horse power	Steam	Air	Electric							
Philadelphia and Reading Coal and Iron Co.,	Schuylkill,			120	15,000	15,000	10	13		116	23,763	22	28,360	10,020		7
Lentz Coal Co.,				16	4,000	4,000	2				4,060	3	4,800			
Lehigh Valley Coal Co.,				11	1,750	1,750	1		4	40	2,506	4	6,353	4,617	1	1
Totals,				147	20,750	20,750	13	13	4	156	30,329	29	39,513	14,637	1	8

TABLE 3.—Number of each class of employes inside and outside of mines

Names of Operators	County	Inside												Outside										Grand total inside and outside
		Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Doorboys and helpers	Pumpmen	Company men	All other employes	Total inside		Superintendents	Foremen	Blacksmiths and carpenters	Engineers and firemen	Slate pickers (boys)	Slate pickers (men)	Bookkeepers and clerks	All other employes	Total outside	
Philadelphia and Reading Coal and Iron Co.,	Schuylkill,	8	57	----	1,462	734	299	74	14	621	847	4,116		----	18	68	205	529	117	35	1,027	1,999	6,115	
Lentz Coal Co.,		2	4	5	170	190	40	2	8	38	90	549		2	1	24	60	12	87	7	129	322	871	
Lehigh Valley Coal Co.,		1	4	----	100	62	19	2	6	------	89	283		----	2	12	26	13	5	2	109	169	452	
Totals,		11	65	5	1,732	986	358	78	28	659	1,026	4,948		2	21	104	291	554	209	44	1,265	2,490	7,438	

TABLE 3 —Part 2

Names of Operators	County	Average Number of Days Worked in Breaker												
		January	February	March	April	May	June	July	August	September	October	November	December	Total
Philadelphia and Reading Coal and Iron Co.,	Schuylkill,	20	15	23	20	16	15	11	13	13	20	23	22	211
Lentz Coal Co.,		20	17	22	22	18	19	12	6	15	19	14	16	200
Lehigh Valley Coal Co.,		20	14	18	22	14	15	11	6	10	16	23	22	191

TABLE 4.—Fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Colliery	County	Nature and Cause of Accident in Brief
Jan. 12	Eral Lynn,	American,	Laborer,	19	S.			Mahanoy City,		Fatally injured. While oiling a gearing wheel on conveyor line he slipped on the ice and fell between pinion and plank. Died January 15, at the State Hospital. Outside.
25	John Knishuskey,	Polish,	Miner,	40	M.	1	5	St. Nicholas,		Fatally injured by fall of coal at face of breast. He died on the way home.
Feb. 3	Joe. Pormaskie,	Polish,	Miner,	37	M.	1	6	Suffolk,		Killed by being smothered by rush of coal in counter gangway.
13	John Buckcar,	Polish,	Laborer,	24	S.			North Mahanoy,		Killed by fall of coal at face of skip.
March 10	Julian Misafskie,	Polish,	Miner,	27	S.			Ellangowan,		Killed by being caught between starting and the roof at battery.
12	Andrew Crowlis,	Lithuanian,	Miner,	32	M.	1	2	Maple Hill,		Killed by fall of coal at face of breast.
15	John Subrilis,	Lithuanian,	Miner,	26	S.			Ellangowan,		Killed by falling down an empty breast.
18	Martin Dershkavige,	Polish,	Miner,	34	M.	1	1	St. Nicholas,	Schuylkill,	Killed by being caught between car and prop in tunnel.
April 15	Edward McCoog,	Irish,	Miner,	52	M.			Maple Hill,		Fatally injured by premature blast. Died on the way home.
17	John Schames,	Slavonian,	Miner,	36	M.	1	1	Tunnel Ridge,		Killed by explosion of a box of dynamite caps.
May 25	Joe Zuittor,	Lithuanian,	Starter,	30	S.			Maple Hill,		Killed by an explosion of powder and dynamite caps.
29	James Holloway,	English,	Fire boss,	42	M.	1	2	Tunnel Ridge,		Killed by falling down main airway.
June 24	Bolick Patracivh,	Lithuanian,	Miner,	23	S.			Maple Hill,		Killed by fall of coal on gangway.
July 12	Simon Hugo,	Italian,	Miner,	27	M.	1	2	Primrose,		Killed by fall of rock at face of skip.
Aug. 12	Mike Lucavige,	Lithuanian,	Miner,	53	M.	1	3	Suffolk,		Killed by being run over by a trip of cars on main gangway.
Sept. 2	Steve Barcofskie,	Polish,	Miner,	28	M.	1	1	Ellangowan,		Fatally injured by an explosion of powder. Died September 12 at the State Hospital.

TABLE 4—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Colliery	County	Nature and Cause of Accident in Brief
Oct. 18	Frank Bersofskie, ---	Russian, ---	Miner, ...	30	M.	1	1	Ellangowan, -----		Killed by being thrown off car by a stick of timber.
21	August Batkin, ------	Polish, ----	Repairman, --	25	S.	----	----	St. Nicholas, ----		Fatally injured by falling off platform in breaker. Died October 23 at the State Hospital. Outside.
Nov. 2	John Astroskie, -----	Polish, ----	Miner, ...	36	S.	----	----	Maple Hill, -----	Schuylkill, ..	Fatally injured by an explosion of gas. Died November 26 at the State Hospital.
27	Alex Azalavich, -----	Polish, ----	Miner, ...	28	M.	1	6	Maple Hill, -----		Fatally injured by premature blast. Died the same day at the State Hospital.

TABLE 5.—Non-fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Colliery	County	Nature and Cause of Accident in Brief
Jan. 5	John Valutcavige, ---	Lithuanian,	Miner, -----------	23	M.	Maple Hill, -------		Leg broken by fall of coal at face of breast.
15	John D. Ward, ------	American,--	Miner, -----------	35	M.			
	Joseph Kouglas, -----	Lithuanian,	Miner, -----------	38	M.	Mahanoy City, ---		Slightly burned by gas at face of skip.
	John Bresko, --------	Slavonian,	Laborer, ---------	35	M.			
28	Claude Link, --------	German, ---	Topman, ---------	19	S.	North Mahanoy, --		Foot caught between latch and rail. Outside.
Feb. 4	William Beckett, -----	English,----	Driver, -----------	19	S.	Mahanoy City, ---		Leg broken by falling under mine car on gangway.
12	Stephen Sinjack, ----	Slavonian,	Car runner, ------	23	S.	Mahanoy City, ---		Back injured by falling under mine car on slant gangway.
24	George Daminites, ---	Lithuanian,	Laborer, ----------	28	M.	Mahanoy City, ---		Hand injured by an explosion of dynamite caps.
March 12	Peter Kerrick, -------	Polish, ----	Miner, -----------	30	S.	Park Place, ------		Injured by fall of coal at face of breast.
16	Andrew Martincavage,	Lithuanian,	Laborer, ----------	27	S.	Suffolk, ----------		Injured by fall of slate at face of breast.
20	John Litvinskie, -----	Lithuanian,	Miner, -----------	25	M.	Maple Hill, ------	Schuylkill, ------	Injured by fall of coal at face of breast.
24	Joe. Zefostoskie, ----	Lithuanian,	Miner, -----------	25	S.	Suffolk, ----------		Injured by premature blast at face of gangway.
April 15	Anth. Somenavige, --	Polish, ----	Miner, -----------	35	S.	Park Place, ------		Injured by fall of coal at face of breast.
May 15	Frank Chaskusy, ----	Polish, ----	Laborer, ----------	40	M.	St. Nicholas, -----		Injured by falling under railroad car. Outside.
June 23	Julian Kerpovige, ----	Polish, ----	Miner, -----------	43	M.	Suffolk, ----------		Injured by premature blast at face of gangway.
24	Joe. Kasperovige, ---	Lithuanian,	Miner, -----------	36	M.	Suffolk ----------		Leg broken by buggy coming back on tipple.
Sept. 27	Charles Adlis, -------	Lithuanian,	Miner, -----------	32	M.	Suffolk, ----------		Slightly burned by gas in chute.
Oct. 20	Henry Spor, ---------	French,----	Timberman, ------	33	M.	Maple Hill, ------		Injured by fall of slate on slant gangway.
Nov. 2	Edward Murphy, ----	American,--	Miner, -----------	49	M.	Maple Hill, ------		Slightly burned by gas at face of breast.
24	James Foley, --------	American,--	Laborer, ----------	60	S	Ellanwogan, ------		Injured by being caught between cars. Outside.

CONDITION OF COLLIERIES

PHILADELPHIA AND READING COAL AND IRON COMPANY

Ellangowan.—Ventilation, drainage and condition as to safety, good.

St. Nicholas.—Ventilation, drainage and condition as to safety, good.

Suffolk.—Ventilation, drainage and condition as to safety, good.

Maple Hill.—Ventilation, drainage and condition as to safety, good.

Tunnel Ridge.—Ventilation, drainage and condition as to safety, good.

Mahanoy City.—Ventilation, drainage and condition as to safety, good.

North Mahanoy.—Ventilation, drainage and condition as to safety, good.

LENTZ COAL COMPANY

Park No. 2.—Ventilation, drainage and condition as to safety, good.

LEHIGH VALLEY COAL COMPANY

Primrose.—Ventilation, drainage and condition as to safety, fair.

IMPROVEMENTS

PHILADELPHIA AND READING COAL AND IRON COMPANY

Ellangowan Colliery.—Extension of tunnel on plane level, West Bottom Split to Buck Mountain vein, driven from Seven Foot vein, total length 47 yards. A standard colliery supply store-house was erected.

St. Nicholas Colliery.—Installed an electric plant to furnish power to run the Suffolk Nos. 1 and 3 dirt dredgers, electric haulage on second lift, Suffolk Colliery, and for lighting purposes. Tunnel driven to little Buck Mountain vein from Bottom Split third lift gangway, South dip at breast No. 73, total length 103 yards. Tunnel driven to Buck Mountain vein from Skidmore vein, third lift east of slope on line of tunnel from Bottom Split to Skidmore, total length 55 yards. Tunnel to Seven Foot from East Skidmore gangway third lift, total length 17 1-3 yards. A Standard colliery supply store-house was erected. Equipped the two upper sections of St. Nicholas dirt scraper line with electric rope drive.

Tunnel Ridge Colliery.—A tunnel was driven to Seven Foot and Skidmore veins from West Buck Mountain second lift north dip, total length 49 yards.

Mahanoy City Colliery.—A tunnel was driven from West Buck Mountain to Seven Foot vein, total length 44 2-3 yards. Tunnel driven to connect with old water level, Top Split, total length 91 2-3 yards.

North Mahanoy Colliery.—A ten-inch bore hole for rope and signals driven from surface to Bottom Split, total depth 306 yards.

LENTZ COAL COMPANY

Park No. 2 Colliery.—A drainage tunnel was driven from Park No 2 to Park No. 3, total length 3,477 feet. Tunnel driven at Park No. 1 across the basin from south dip Buck Mountain to north dip Buck Mountain vein, total length 742 feet. Two Stirling boilers, Class B. 30, for steam purposes installed at Park No. 1.

MINE FOREMEN'S EXAMINATIONS

The examination of applicants for certificates of qualification as Mine Foremen and Assistant Mine Foremen, was held at Pottsville, June 28 and 29. The Board was composed of the following members: P. C. Fenton, Mine Inspector, Mahanoy City; James L. Reese, Superintendent, Park Place; Robert Roberts, Miner, St. Nicholas; P. H. Devine, Miner, Shaft P. O.

The following persons passed a satisfactory examination and were granted certificates.

Mine Foremen

George Brokenshire, Park Place; William Townson, Gilberton.

Assistant Mine Foremen

James Dorning, Mahanoy City; Edward O'Donnell, Mahanoy City; Lewis Sticker, Mahanoy City; George Maley, Shenandoah; John Jones, St. Nicholas; James Davenport, St. Nicholas; Walter Burns, Mahanoy City; Thomas James, Mahanoy City.



THIRTEENTH DISTRICT

SCHUYLKILL COUNTY

Shenandoah, Pa., March 1, 1910.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: In compliance with the provisions of the Anthracite Mine Law, I herewith transmit the report of the Thirteenth District for the year ending December 31, 1909.

Respectfully submitted,

A. B. LAMB,
Inspector.

SUMMARY OF STATISTICS

Number of collieries,	18
Number of mines,	34
Number of mines in operation,	34
Number of tons of coal shipped to market,	2,351,039
Number of tons used at mines for steam and heat,	364,525
Number of tons sold to local trade and used by employes,	50,246
Number of tons produced,	2,765,810
Number of tons produced by compressed air machines,	.....
Number of tons produced by electrical machines,	.....
Number of persons employed inside of mines,	5,114
Number of persons employed outside,	3,145
Number of fatal accidents inside of mines,	19
Number of fatal accidents outside,	8
Number of non-fatal accidents inside of mines,	25
Number of non-fatal accidents outside,	6
Number of tons of coal produced per fatal accident inside,	145,569
Number of persons employed per fatal accident inside,	269
Number of persons employed per fatal accident outside,	393
Number of persons employed per non-fatal accident inside,	205
Number of persons employed per non-fatal accident outside,	524
Number of wives made widows,	8
Number of children made orphans,	10
Number of steam locomotives used inside of mines,	.....
Number of steam locomotives used outside,	42
Number of compressed air locomotives used inside,	5
Number of compressed air locomotives used outside,	.....
Number of electric motors used inside,	.....
Number of electric motors used outside,	.....
Number of fans in use,	29
Number of furnaces in use,	.....
Number of gaseous mines in operation,	29
Number of non-gaseous mines in operation,	5
Number of new mines opened,	3
Number of old mines abandoned,	.....

TABLE A

PRODUCTION OF COAL

Names of Operators	Tons
Philadelphia and Reading Coal and Iron Company,	1,479,889
Lehigh Valley Coal Company,	379,741
Thomas Colliery Company,	341,586
Susquehanna Coal Company,	236,940
Brookwood Coal Company,	67,852
Gerber and Seaman,	41,770
Cambridge Coal Company,	28,882
William Niswenter,	7,173
H. H. Smith and Company,	76,880
Brighton Coal Company,	71,033
Oxford Coal Company,	34,064
Total,	2,765,810

Production by Counties

Schuylkill,	2,765,810

TABLE B.—Fatal and non-fatal accidents inside and outside of mines; number of tons of coal produced per accident; number of persons employed; number employed per accident

Names of Operators	Fatal Accidents			Non-Fatal Accidents			Tons of coal produced per fatal accident inside	Tons of coal produced per non-fatal accident inside	Number of employes inside	Number of employes outside	Total number of employes	Number of employes inside per fatal accident	Number of employes outside per fatal accident	Number of employes inside per non-fatal accident	Number of employes outside per non-fatal accident
	Inside	Outside	Total	Inside	Outside	Total									
Philadelphia and Reading Coal and Iron Co.,	12	7	19	10	2	12	123,324	147,989	3,481	1,833	5,314	290	262	348	916
Lehigh Valley Coal Co.,	4	1	5	3	.....	3	94,935	126,580	666	430	1,096	166	430	222	.....
Thomas Colliery Co.,	1	.....	1	5	2	7	341,586	68,317	342	246	588	342	.....	68	123
Susquehanna Coal Co.,	1	.....	1	1	1	2	236,940	236,940	416	214	630	416	.....	416	214
Brookwood Coal Co.,	1	.....	1	2	.....	2	67,852	33,926	68	86	154	68	.....	34	.....
Gerber and Seaman,	.....	.....	.....	1	.....	1	.....	41,770	69	60	129	.....	.....	69	.....
Cambridge Coal Co.,	.....	.....	.....	3	.....	3	.....	9,627	66	26	92	.....	.....	22	.....
Oxford Coal Co.,	.....	.....	.....	.....	1	1	.....	.....	.....	85	85	.....	.....	.....	85
Miscellaneous Companies,	.....	.....	.....	.....	.....	.....	.....	.....	6	165	171	.....	.....	.....	.....
Totals and averages for district,	19	8	27	25	6	31	145,569	110,632	5,114	3,145	8,259	269	393	205	524

TABLE C.—Classification of Fatal Accidents Inside and Outside of Mines

	Months													
	January	February	March	April	May	June	July	August	September	October	November	December	Totals	Percentages
Causes of Accidents Inside														
Falls of coal,			1										1	5.26
Falls of slate,			1				1						2	10.53
Falls of roof,	1		1		1	1			1				5	26.32
Mine cars,	1		1						1	1			4	21.05
Explosions of gas,					1								1	5.26
Suffocation by gas, etc.,			1										1	5.26
Explosions of powder and dynamite,			1							2			3	15.79
Blasts, premature and otherwise,			1									1	2	10.53
Totals,	2		7		2	1	1		2	3		1	19	100.00
Causes of Accidents Outside														
Cars,	1											1	2	25.00
Machinery,	1			1								1	3	37.50
Suffocation in chutes, etc.,		1											1	12.50
Miscellaneous,										1		1	2	25.00
Totals,	2	1		1						1		3	8	100.00
Grand totals inside and outside,	4	1	7	1	2	1	1		2	4		4	27	

TABLE D.—Classification of Non-Fatal Accidents Inside and Outside of Mines

	Months													
	January	February	March	April	May	June	July	August	September	October	November	December	Totals	Percentages
Causes of Accidents Inside														
Falls of coal,							1			1	2	1	5	20.00
Falls of slate,					1	1							2	8.00
Falls of roof,		1		1				1			1		4	16.00
Mine cars,				1					1				2	8.00
Explosions of powder and dynamite,						1							1	4.00
Blasts, premature and otherwise,						1	1	1		1	2	1	7	28.00
Falling into slopes, etc.,							1			1			2	8.00
Miscellaneous,			1								1		2	8.00
Totals,		1	1	2	1	3	2	2	1	3	6	2	25	100.00
Causes of Accidents Outside														
Cars,									1	1			2	33.33
Machinery,	1	1									1		3	50.00
Miscellaneous,										1			1	16.67
Totals,	1	1							1	2	1		6	100.00
Grand totals inside and outside,	1	2	1	2	1	3	3	2	2	5	7	2	31	

TABLE E.—Occupations of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Inside													
Fire bosses and assistants,			1										1
Miners,			2		1	1	1		1	1		1	8
Miners' laborers,	2		3							1			6
Drivers and runners,					1				1	1			3
Contractors,			1										1
Totals,	2		7		2	1	1		2	3		1	19
Outside													
Blacksmiths and carpenters,										1		1	2
Slatepickers (boys),				1									1
Jig runners,												1	1
Laborers,	1	1										1	3
Oilers,	1												1
Totals,	2	1		1						1		3	8
Grand totals inside and outside,	4	1	7	1	2	1	1		2	4		4	27

TABLE F.—Occupations of Persons Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Inside													
Miners,			1		1		1	2	1	2	5	2	15
Miners' laborers,		1		1		3	2			1	1		9
Bottom men,				1									1
Totals,		1	1	2	1	3	3	2	1	3	6	2	25
Outside													
Laborers,		1								2			3
Jig-runners,	1												1
Patchers,									1				1
Oilers,											1		1
Totals,	1	1							1	2	1		6
Grand totals inside and outside,	1	2	1	2	1	3	3	2	2	5	7	2	31

TABLE G.—Nationality of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
American,	1				1				1	2		1	6
Welsh,	1												1
Irish,			1										1
Polish,			2				1						3
Hungarian,	1												1
Italian,			1									2	3
Slavonian,			1										1
Lithuanian,	1		2		1				1	2			7
Austrian,				1		1							2
Greek,		1										1	2
Totals,	4	1	7	1	2	1	1		2	4		4	27

TABLE H.—Nationality of Persons Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
American,	1		1	1					1	3	2		9
Irish,					1			1			1		3
Polish,		2				2	1	1			3		9
Hungarian,											1		1
Slavonian,										1			1
Lithuanian,				1			2		1	1		1	6
Austrian,						1						1	2
Totals,	1	2	1	2	1	3	3	2	2	5	7	2	31

TABLE I.—Operators and mines, kind of openings, type and size of fans, size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents and number of persons employed inside

Names of Operators and Mines	Kind of opening	Gaseous or non-gaseous	Method of ventilation	Diameter of fan in feet and inches	Width of blades in feet and inches	Depth of blades in feet and inches	Number of revolutions per minute	Water gauge developed—in inches	Name of fan	Power used	Number of splits of air currents	Number of cubic feet of air per minute entering the mine at inlet	Total quantity of air per minute circulating in all the splits in cubic feet	Number of cubic feet per minute passing out at outlet	Number of persons employed inside
Philadelphia and Reading Coal and Iron Co.															
West Shenandoah Colliery:															
West Shenandoah,	Slope,	Gaseous,	2 Fans,	18 21	6.6 7	6 6	70 88	1 3	Guibal,	Steam,	13	155,079	95,324	170,615	461
Kohinoor Colliery:															
Kohinoor,	Shaft,	Gaseous,	Fan,	18	6	4.5	75	.5	Guibal,	Steam,	6	65,890	52,840	70,740	220
Turkey Run Colliery:															
Turkey Run No. 1,	Drift,	Gaseous,	Fan,	21			90	3	P. and R.	Steam,	6	131,620	75,280	134,910	575
Turkey Run No. 2,	Drift,	Gaseous,	Fan,	8			70	1.5	Guibal,	Steam,	1				
Turkey Run No. 5,	Slope,	Gaseous,	*					.3			1				
Turkey Run No. 8,	Slope,	Gaseous,	Fan,	8			184	.9		Electricity,	5				
Draper Colliery:															
Draper No. 1,	Slope,	Gaseous,	Fan,	18				1.4	Guibal,	Steam,	10	148,075	83,375	150,220	533
Draper No. 2,	Slope,	Gaseous,	2 Fans,	12 18	6.6 6.6	6 6	86 86	6 1.6	Guibal, Guibal,	Steam, Steam,					
Gilberton Colliery:															
Gilberton No. 1,	Slope,	Gaseous,	Fan,	21	7	6	70	1.7	Guibal,	Steam,	9	80,500	56,900	84,700	391
Gilberton No. 2,	Slope,	Gaseous,													
Boston Run Colliery:															
Boston Run,	Slope,	Gaseous,	Fan,	21	7	6.5	80	1.8	Guibal,	Steam,	14	112,800	49,940	117,260	207
Shenandoah City Colliery:															
Shenandoah City,	Shaft,	Gaseous,	Fan,	21			78	2	P. and R.	Steam,	16	95,943	45,580	96,540	436
Shenandoah City,	Slope,	Gaseous,													
Shenandoah City,	Drift,	Non-gas.	†Fan,	6.8	6.6	6	96	1.8	Guibal,						

*Ventilated by fan at Turkey Run No. 1 Drift. †Temporary fan. Dimensions not given.

Knickerbocker Colliery:																
Knickerbocker No. 1,	Slope,	---	Gaseous,	2 Fans,	18					Guibal,	Steam,	15	95,787	92,860	96,740	392
Knickerbocker No. 2,	Slope,	---	Gaseous,		12											
Knickerbocker,	Drift,	---	Non-gas.	Natural,												
Indian Ridge Colliery:																
Indian Ridge,	Shaft,	---	Gaseous,	2 Fans,	18	6	4.5	75	1.1	Guibal,	Steam,	10	146,416	86,133	148,667	266
					15	5	4.75	80	1	Guibal,	Steam,					
Indian Ridge No. 1,	Slope,	---	Gaseous,	Fan,	12	4	4	45	.3	Guibal,	Steam,					
Indian Ridge No. 2,	Slope,	---	Gaseous,	Natural,												
Lehigh Valley Coal Co.																
Packer Colliery No. 2:																
Packer No. 2,	Slope,	---	Gaseous,	Fan,	20	6	5.5	61	.67			5	89,000	65,000	92,000	221
Packer Colliery No. 3:																
Packer No. 3,	Slope,	---	Gaseous,	Fan,	18	6.1	5.4	70	.6	Guibal,	Steam,	9	103,000	75,000	105,000	241
Packer Colliery No. 4:																
Packer No. 4,	Slope,	---	Gaseous,	Fan,	20	6.9	5.11	62	.8			12	83,000	61,000	85,000	204
Thomas Colliery Co.																
Kehley Run Colliery:																
Kehley Run,	Slope,	---	Gaseous,	2 Fans,	16	6	5	100	2.5	Guibal,	Steam,	7	105,000	52,000	109,000	
					12	4	3	150	1							
Kehley Run No. 3,	Slope,	---	Gaseous,	Fan,	8			120	1.5	Black-man,	Steam,	4	30,000	29,000	32,000	342
Kehley Run No. 4,	Slope,	---	Gaseous,	Natural,								2	15,000	14,500	15,500	
Susquehanna Coal Co.																
William Penn Colliery:																
William Penn,	Drift,	---	Non-gas.	Fan,	18	7	9	75	.75	Guibal,		4	66,130	57,400	60,390	
William Penn,	Shaft,	---	Gaseous,	Fan,	18	7	9	70	.8	**Guibal,**	Steam,	3	40,250	38,929	54,120	416
William Penn,	Shaft,	---	Gaseous,	Fan,	18	7	9	35		Sturde-vant,		2	35,000	40,000	40,000	
Brookwood Coal Co.																
Stanton Colliery:																
Stanton,	Slope,	---	Gaseous,	Fan,	15	4	4.75	60	1.2	Guibal,	Steam,	3	26,950	26,500	28,000	68
Gerber and Seaman																
Furnace Colliery:																
Furnace,	Slope,	---	Gaseous,	Natural,					.5			---	16,000	12,000	‡	69
Furnace,	Drift,	---														
Cambridge Coal Co.																
Cambridge Colliery:																
Cambridge,	Drift,	---	Non-gas.	Fan,	8	4	2.5	150		Cole,	Steam,	3	30,000	§	§	66
William Niswenter																
Niswenter Colliery:																
Niswenter,	Drift,	---	Non-gas.	Natural,												6

‡Going out through old workings. §No record.

TABLE 1.—Operators, location of collieries, railroads, etc.

Names of Operators and Collieries	County	Name of General Superintendent	Post Office	Name of Superintendent	Post Office	Railroad to Mine
Philadelphia and Reading Coal and Iron Co.						
West Shenandoah,						
Kohinoor,						
Turkey Run,						
Draper,						
Boston Run,	Schuylkill,	W. J. Richards,	Pottsville,	Reese Tasker,	Pottsville,	P. and R.
Shenandoah City,						
Knickerbocker,						
Indian Ridge,						
Plank Ridge Washery,						
Lehigh Valley Coal Co.						
Packer No. 2,						
Packer No. 3,	Schuylkill,	S. D. Warriner,	Wilkes-Barre,	J. M. Humphrey,	Centralia,	Lehigh Valley
Packer No. 4,						
Thomas Colliery Co.						
Kehley Run,	Schuylkill,					
Gilberton,	Schuylkill,	W. G. Thomas,	Hazleton,			P. and R.
Susquehanna Coal Co.						
William Penn,	Schuylkill,	Robert A. Quin,	Wilkes-Barre,	Eugene A. Rhoads,	Shaft,	Pennsylvania
Brookwood Coal Co.						
Stanton,	Schuylkill,	W. G. Thomas,	Hazleton,			P. and R.
Gerber and Seaman						
Furnace,	Schuylkill,	M. A. Gerber,	Tamaqua,	M. A. Gerber,	Tamaqua,	P. and R.
Cambridge Coal Co.						
Cambridge,	Schuylkill,	D. R. James,	Shenandoah,	D. R. James,	Shenandoah,	P. and R.
William Niswenter						
Niswenter,	Schuylkill,	William Niswenter,	Shenandoah,	William Cooper,	Shenandoah,	

H. H. Smith and Co. Hudson Washery,	Schuylkill,	Henry Meyers,	Minersville,	M. E. Jones,	Shenandoah,	P. and R.
Brighton Coal Co. Brighton Washery,	Schuylkill,			J. A. Davis,	Gilberton,	P. and R.
Oxford Coal Co. Oxford Washery,	Schuylkill,	W. G. Thomas,	Hazleton,	Felix L. Klock,	Shenandoah,	P. and R.

TABLE 2.—Number of tons of coal mined, number of days worked, number of persons employed, number killed and injured, quantity of powder, dynamite and so-called safety explosives used, etc.

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Explosives: Number of pounds of powder used	Explosives: Number of pounds of dynamite used	Explosives: Number of pounds of so-called safety explosives used	Number of horses and mules
Philadelphia and Reading Coal and Iron Co.													
West Shenandoah,	Schuylkill,	429,675	61,975	9	491,659	198	872	4	1	115,200	16,047	100	37
Kohinoor,		.....	.....	.....	.....	.....	262	2	2	19,900	8,499	.....	20
Turkey Run,		.....	.....	.....	.....	.....	699	1	2	93,375	33,058	27	43
Draper,		258,063	17,490	.....	275,553	211	795	4	5	57,425	97,231	11,550	69
Gilberton,		135,647	32,930	3,089	171,666	212	624	3	1	32,500	68,723	5,575	46
Boston Run,		121,990	36,608	.....	158,598	213	356	....	....	13,350	49,988	.....	17
Shenandoah City,		91,223	36,957	27,973	156,153	143	628	4	....	60,525	11,064	.....	45
Knickerbocker,		79,621	25,552	1,262	106,435	110	658	....	1	42,225	14,770	4,586	36
Indian Ridge,		57,917	2,361	.....	60,278	.....	316	1	....	28,400	5,680	.....	41
Plank Ridge Washery,		53,597	3,606	2,344	59,547	121	104	....	....	.....	8	.....	1
Totals,		1,227,733	217,479	34,677	1,479,889	.....	5,314	19	12	462,900	305,068	21,838	355
Lehigh Valley Coal Co.													
Packer No. 2,	Schuylkill,	101,594	15,143	.....	116,737	*	267	2	....	47,025	14,706	.....	30
Packer No. 3,		131,245	24	.....	131,269	*	299	1	3	19,875	13,947	.....	38
Packer No. 4,		78,571	52,780	384	131,735	176	530	2	....	62,900	6,557	.....	37
Totals,		311,410	67,947	384	379,741	.....	1,096	5	3	129,800	35,210	.....	105
Thomas Colliery Co.													
Kehley Run,	Schuylkill,	316,608	22,159	2,819	341,586	270	588	1	7	189,825	38,423	.....	42

*Coal prepared at No. 4 Breaker.

Susquehanna Coal Co. William Penn,	Schuylkill,	198,030	36,596	2,314	236,940	109	630	1	2	76,125	32,088	.....	63
Brookwood Coal Co. Stanton,	Schuylkill,	64,881	2,800	171	67,852	187	154	1	2	3,125	9,000	.....	10
Gerber and Seaman Furnace,	Schuylkill,	37,821	3,880	69	41,770	194	129	....	1	.....	21,500	.....	12
Cambridge Coal Co. Cambridge,	Schuylkill,	22,281	2,016	4,585	28,882	168	92	....	3	21,875	4,650	.....	7
William Niswenter Niswenter,	Schuylkill,	1,855	100	5,218	7,173	275	20	....	....	.....	1,500	.....	5
H. H. Smith and Co. Hudson Washery,	Schuylkill,	73,219	3,661	.....	76,880	144	64	....	....	.....	.....	.....	.....
Brighton Coal Co. Brighton Washery,	Schuylkill,	65,533	5,500	.....	71,033	165	87	....	....	.....	.....	.....	3
Oxford Coal Co. Oxford Washery,	Schuylkill,	31,668	2,587	9	34,064	73	85	....	1	.....	125	.....	1
Grand totals,		2,351,039	364,525	50,246	2,765,810	.....	8,259	27	31	883,650	447,564	21,838	603

TABLE 2.—Part 2.

Names of Operators	County	Number of Boilers					Locomotives			Number of steam engines of all classes	Total horse power	Number of pumps delivering water to surface	Capacity in gallons per minute	Quantity delivered to surface per minute—gallons	Number of electric dynamos	Number of air compressors
		Cylindrical	Horse power	Tubular	Horse power	Total horse power	Steam	Air	Electric							
Philadelphia and Reading Coal and Iron Co.	Schuylkill,			124	15,800	15,800	18	5		130	24,625	18	20,367	6,648		12
Lehigh Valley Coal Co.,				20	4,200	4,200	4			59	6,446	8	6,212	4,881	1	
Thomas Colliery Co.,				11	1,650	1,650	7			15	1,213	4	5,000	700		
Susquehanna Coal Co.,				15	2,350	2,350	1			19	1,585	1	1,300	611		
Brookwood Coal Co.,				5	600	600	3			11	411	1	387	125		
Gerber and Seaman,				4	330	330				9	125	1	360	150		
Cambridge Coal Co.,				3	300	300	1			4	100					
William Niswenter,				1	25	25				1	15					
H. H. Smith and Co.,				3	375	375	2			8	276					
Brighton Coal Co.,				8	900	900	3			13	628					
Oxford Coal Co.,				5	600	600	3			4	350					
Totals,				199	27,130	27,130	42	5		273	35,774	33	33,626	13,115	1	12

TABLE 3.—Number of each class of employes inside and outside of mines

Names of Operators	County	Inside											Outside									Grand totals inside and outside
		Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Doorboys and helpers	Pumpmen	Company men	All other employes	Total inside	Superintendents	Foremen	Blacksmiths and carpenters	Engineers and firemen	Slate pickers (boys)	Slate pickers (men)	Bookkeepers and clerks	All other employes	Total outside	
Philadelphia and Reading Coal and Iron Co.	Schuylkill,	8	55	----	1,025	821	210	30	21	669	642	3,481	----	15	69	220	330	128	38	1,033	1,833	5,314
Lehigh Valley Coal Co.,		3	9	4	255	144	52	13	14	------	172	666	1	4	27	57	35	23	6	277	430	1,096
Thomas Colliery Co.,		1	2	3	157	88	13	4	5	30	39	342	----	4	16	16	58	5	7	140	246	588
Susquehanna Coal Co.,		1	1	6	127	67	41	1	7	21	144	416	1	1	19	27	43	16	6	101	214	630
Brookwood Coal Co.,		1	----	2	25	21	5	------	3	3	8	68	----	1	4	15	17	------	1	48	86	154
Gerber and Seaman,		1	----	1	22	26	8	1	2	8	------	69	1	1	5	5	27	1	1	19	60	129
Cambridge Coal Co.,		1	1	1	22	30	3	1	------	3	4	66	1	1	2	6	6	2	1	7	26	92
William Niswenter,		1	----	----	2	2	1	------	------	------	------	6	----	----	----	1	7	------	------	6	14	20
H. H. Smith and Co.,		----	----	----	----	----	----	----	------	------	------	------	1	2	5	10	12	3	1	53	87	87
Brighton Coal Co.,		----	----	----	----	----	----	----	------	------	------	------	1	1	4	13	7	1	1	57	85	85
Oxford Coal Co.,		----	----	----	----	----	----	----	------	------	------	------										
Totals,		17	68	17	1,635	1,199	333	50	52	734	1,009	5,114	7	31	157	378	544	182	63	1,783	3,145	8,259

TABLE 3.—Part 2

Names of Operators	County	Average number of Days worked in Breaker												
		January	February	March	April	May	June	July	August	September	October	November	December	Total
Philadelphia and Reading Coal and Iron Co.,	Schuylkill,	17	15	23	21	14	12	8	9	8	16	19	18	181
Lehigh Valley Coal Co.,		19	14	18	20	14	15	10	5	9	9	22	21	176
Thomas Colliery Co.,		24	23	27	18	13	21	23	24	25	24	24	24	270
Susquehanna Coal Co.,		20	13	18	18	16	14	11	11	13	18	18	20	190
Brookwood Coal Co.,		22	23	16	----	----	----	----	13	14	22	18	11	194
Gerber and Seaman,		19	13	23	21	16	14	10	16	12	11	16	14	168
Cambridge Coal Co.,		18	16	20	15	----	17	13	23	22	23	25	24	275
William Niswenter,		22	23	24	24	21	22	22	26	25	24	26	26	187

TABLÆ 4.—Fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Colliery	County	Nature and Cause of Accident in Brief
Jan. 9	Jno. Williams,	Welsh,	Laborer,	72	M.			Kohinoor,		Fatally injured. He was helping to put a car on cage at bottom of shaft and forgot to sprag the car behind and when it moved forward he was caught between the bumpers.
13	Jno. Macula.	Hungarian,	Laborer,	21	S.			Gilberton,		Fataly injured by being squeezed about body. A car was approaching him under the breaker and he failed to get get out of the way and was crushed between car and foundation. Died February 14. Outside.
17	Oscar Leibey,	American,	Oiler,	19	S.			Draper,		Killed by machinery. While oiling the shaker cams his clothes caught and he was whirled around shaft. Outside.
22	Ant. Stank,	Lithuanian,	Laborer,	27	S.			West Shenandoah,	Schuylkill,	Killed by fall of rock while retimbering old airway near main slope.
Feb. 24	Jno. Rendko,	Greek,	Laborer,	27	S.			West Shenandoah,		Killed by rush of culm. Smothered. Outside.
March 1	Mike. Swalada,	Slavonian,	Laborer,	30	M.	1		Draper,		Killed by fall of rock near face of breast.
6	William Sewalski,	Polish,	Laborer,	40	S.			Packer No. 2,		Killed by cars. He was attempting to jump on the front of a moving trip of cars and fell under wheels.
12	William Leary,	Irish,	Fire boss,	39	S.			Packer No. 3,		Killed by gas. While assisting another fire boss to measure a manway up to the face of the breast, where gas was standing in the face, he attempted to rush up to the top of manway with the end of tape and was smothered.
18	Thomas Monoutskie,	Lithuanian,	Miner,	35	M.	1		Gilberton,		Killed by explosion of dynamite.
23	Enoch Matalavage,	Lithuanian,	Laborer,	29	S.			Indian Ridge,		Killed by fall of coal at face of robbing.

TABLE 4—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Colliery	County	Nature and Cause of Accident in Brief
March 27	Jos. Bienick,	Polish,	Miner,	31	W.	0	2	Shenandoah City,		Killed by fall of slate at face of breast. He returned to face of breast after firing shot, and commenced to work in under a piece of loose slate when it fell on him. Died the next day.
31	Dom. Daracell,	Italian,	Contractor,	28	M.			Packer No. 4,		Killed by blast. He attempted to light nine holes at once in tunnel, and before he left the face the first hole he ignited went off and knocked him down; then all the holes exploded.
April 24	Dan. Chicot,	Austrian,	Slatepicker,	16	S.			West Shenandoah,		Killed by machinery. He attempted to throw a rope off a rope wheel and his hand was caught and pulled into the cogs. Outside.
May 1	Martin Rowan,	American,	Driver,	22	S.			Packer No. 4,	Schuylkill,	Killed by fall of rock while going in gangway with trip of cars, one-half mile from face of gangway.
22	Joseph Pushagenus,	Lithuanian,	Miner,	30	S.			Gilberton,		Fatally burned by explosion of gas. He went up a new chute and took a pick belonging to another man. He removed the canvas opposite his chute that forced the air to the face, and then went up the new chute to return the pick and ignited the gas.
June 1	Walleck Zumla,	Austrian,	Miner,	35	M.	1	2	Kehley Run,		Killed by fall of rock.
July 9	George Mader,	Polish,	Miner,	45	M.	1	1	Shenandoah City,		Fatally injured while robbing at face of heading. He went into an old breast and removed a prop when the top slate fell. Died August 16.
Sept. 15	Jno. Sochalosky,	Lithuanian,	Miner,	40	M.	1	1	William Penn,		Killed by fall of rock at face of chute.

Sept.	15	Tim. Ferguson,	American,	Driver,	19	S.			Kohinoor,		Killed by cars. He attempted to come up the slope with his mule while the engineer was hoisting a trip of cars, and the rope broke and he was caught by the trip.
Oct.	6	Joe. Jobea,	Lithuanian,	Miner,	30	S.			Draper,		Killed by premature explosion of dynamite. In charging a hole with dynamite Jobea used an iron scraper to tamp with, and the dynamite exploded.
		Mike. Novoskas,	Lithuanian,	Laborer,	24	S.					
	9	Edward Boyer,	American,	Carpenter,	37	M.	1		Shenandoah City,		Fatally injured. While taking down the gearing of scraper line he overbalanced and fell about seven feet. Outside.
	14	Peter Bohanic,	American,	Driver,	17	S.			Turkey Run,		Fataly injured by being caught between cars and timber near bottom of slope. He forgot to fix the latches for loaded track in pulling loaded car on turnout, and the car ran on the empty track and crushed him against timber.
Dec.	10	Nich. Garrell,	Italian,	Laborer,	40	M.	1	3	Packer No. 2,	Schuylkill,	Fatally injured between cars. When a loaded car was pushed in the rock track 200 feet away he failed to hear the signal and the car bumped into the empty car and caught him and crushed him. Died January 7, 1910. Outside.
	21	Thomas Llewellyn,	American,	Carpenter,	23	M.	1	1	Shenandoah City,		Fatally injured while hauling a truck load of plank from the saw mill to the ash wash excavation. He jumped off the truck to stop it and fell into the excavation. Died February 6, 1910. Outside.
	28	Frank Furend,	Italian,	Miner,	23	S.			Stanton,		Killed by blast. He attempted to light two rock holes. He ran away and after one hole had gone off he returned to other and it went off and killed him.
	29	Harry Chiot,	Greek,	Jig runner,	20	S.			West Shenandoah,		Killed by machinery. He climbed into the machinery to make repairs before being notified and was killed. Outside.

TABLE 5.—Non-fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Colliery	County	Nature and Cause of Accident in Brief
Jan. 5	William Collins,	American,	Jig boss,	23	S.	Kehley Run,		Right arm fractured. He was repairing a jig while the machinery was stopped, when another employe accidentally struck the clutch and started the jig. Outside.
Feb. 2	Jno. Lakoskie,	Polish,	Laborer,	17	S.	Oxford,		Toes crushed by machinery. Outside.
11	Roman Preasavage,	Polish,	Laborer,	25	S.	Kehley Run,		Head cut and side crushed by fall of rock near face of breast.
March 26	Harry Kennard,	American,	Miner,	22	M.	Turkey Run,		Arm fractured. While standing timber the collar fell from leg and caught him against car.
April 21	Adam Vitcapski,	Lithuanian,	Laborer,	25	S.	Packer No. 3,		Arm broken by fall of rock while robbing gangway.
24	Joseph Bobbin,	American,	Bottom-man,	22	S.	Knickerbocker,		Toes crushed by car at bottom of slope.
May 1	Jno. Dalton,	Irish,	Miner,	45	M.	Kohinoor,		Back, body and legs bruised by fall of slate while robbing pillars.
June 11	Stiney Bootz,	Austrian,	Laborer,	20	S.	Cambridge,	Schuylkill,	Burned by powder. A spark from his lamp ignited the powder.
22	Charles Laiois,	Polish,	Laborer,	31	S.	Turkey Run,		Foot crushed by fall of slate at face of gangway.
28	Frank Laush,	Polish,	Laborer,	20	S.	Cambridge,		Skull fractured while firing shot on rib. He ran into the next breast, and the shot blew through the pillar.
July 1	William McCuskie,	Lithuanian,	Miner,	25	M.	Draper,		Both legs broken by fall of coal back from face of gangway while changing a prop.
9	Adam Vitkouskie,	Lithuanian,	Laborer,	25	S.	Packer No. 3,		Arm broken by falling down manway.
31	Adam Shelanskie,	Polish,	Laborer,	26	S.	Kehley Run,		Arm fractured by being struck by piece of coal from shot.
Aug. 7	George Taylor,	Polish,	Miner,	27	S.	Cambridge,		Leg broken. The shot went off before he reached place of safety.

Aug.	7	Mike Merchandi,	Irish,	Miner,	50	M.	Kohinoor,			Leg broken and back bruised by fall of rock while cleaning up fall on No. 4 slope.
Sept.	7	George Holvey,	American,	Locomotive helper,	20	M.	Kehley Run,			Hip dislocated. He attempted to couple cars while they were in motion and slipped and fell under them. Outside.
	23	Joseph Stank,	Lithuanian,	Miner,	45	M.	Draper,			Body crushed. He was repairing buggy dump when his laborers ran a loaded buggy out of gangway and caught him on dump.
Oct.	6	Jno. Jobea,	Lithuanian,	Laborer,	28	S.	Draper,			Legs injured. The miner in charging a hole with dynamite used an iron scraper to tamp with and the dynamite exploded.
	7	Ides. Eisenhower,	American,	Miner,	36	M.	Kehley Run,			Leg fractured by fall of coal at face while robbing gangway.
	16	Ben. Howard,	American,	Miner,	34	M.	Kehley Run,			Face and head cut. He fell down manway.
	19	Carl Kusczak,	Slavonian,	Laborer,	33	M.	William Penn,			Leg fractured. He was riding up plane on loaded dumper when it jumped off the track and crushed him against the cribbing. Outside.
	27	William Gilbert,	American,	Laborer,	28	S.	Draper,			Leg broken. Crushed by timber on timber bank. Outside.
Nov.	2	Jno. Baskic,	Polish,	Miner,	53	M.	Packer No. 3,			Shoulders and breast bruised by fall of coal at face of gangway.
	8	Ant. Irvin,	Polish,	Miner,	42	S.	Furnace,	Schuylkill,		Face and body injured by fall of rock in stump heading near face.
	11	William Heywood,	American,	Miner,	30	M.	Stanton,			Hand and hip bruised by fall of coal at face of airway.
	13	Jno. Lago,	Hungarian,	Laborer,	23	S.	Draper,			Leg broken while taking timber down timber hole.
	22	William Simmons,	Irish,	Miner,	33	M.	Kehley Run,			Face lacerated and eye injured. He ignited four holes and after three had gone off he returned, when the fourth exploded.
	24	William Davies,	American,	Oiler,	32	M.	Gilberton,			Hand crushed in machinery while cleaning the links on water engines while in motion. Outside.
	27	Peter Suckuskie,	Polish,	Miner,	36	M.	West Shenandoah,			Arm broken and body bruised. He was firing in gangway and the hole exploded before he reached a safe place.
Dec.	28	Lewis Maryona,	Austrian,	Miner,	40	S.	Stanton,			Body cut and bruised by blast. He thought only one hole had ignited and when he returned to tunnel the other hole exploded. Another miner was killed by the same blast.
	29	Mathew Meluskie,	Lithuanian,	Miner,	41	M.	William Penn,			Leg fractured by fall of coal near face of breast.

CONDITION OF COLLIERIES

PHILADELPHIA AND READING COAL AND IRON COMPANY

West Shenandoah.—Ventilation, drainage and condition as to safety, good.

Kohinoor.—Ventilation, drainage and condition as to safety, good.

Turkey Run.—Ventilation, drainage and condition as to safety, good.

Draper.—Ventilation, drainage and condition as to safety, good

Gilberton.—Ventilation, drainage and condition as to safety, good.

Boston Run.—Ventilation, drainage and condition as to safety, good.

Shenandoah City.—Ventilation, drainage and condition as to safety, good.

Knickerbocker.—Ventilation, drainage and condition as to safety, good.

Indian Ridge.—Ventilation, drainage and condition as to safety, good.

LEHIGH VALLEY COAL COMPANY

Packer No. 2.—Ventilation good; drainage fair; condition as to safety, good.

Packer No. 3.—Ventilation good; drainage fair; condition as to safety, good.

Packer No. 4.—Ventilation good; drainage fair; condition as to safety, good.

THOMAS COLLIERY COMPANY

Kehley Run.—Ventilation and drainage good; condition as to safety, fair.

SUSQUEHANNA COAL COMPANY

William Penn.—Ventilation and drainage fair; condition as to safety, good.

BROOKWOOD COAL COMPANY

Stanton.—Ventilation, drainage and condition as to safety, good.

GERBER AND SEAMAN

Furnace.—Ventilation, drainage and condition as to safety, fair.

CAMBRIDGE COAL COMPANY

Cambridge.—Ventilation good; drainage fair; condition as to safety, good.

WILLIAM NISWENTER

Niswenter.—Ventilation good; drainage and condition as to safety, fair.

IMPROVEMENTS

PHILADELPHIA AND READING COAL AND IRON COMPANY

Kohinoor Colliery

Sump gangway in Skidmore vein, total length 206 2-3 yards.

Tunnel to inversion of Mammoth vein, total length 201 2-3 yards.

Electric pumping plant in No. 6 slope, 3rd lift, East Buck Mountain gangway.

Two tunnels from Buck Mountain vein to Little Buck vein, total length 36 1-3 yards.

Electric haulage in shaft level gangways.

West Shenandoah Colliery

Pumping plant installed on 5th lift.

General store house completed.

Electric power plant enlarged and one additional generator is being installed.

Gravity plane in Skidmore vein on 5th lift, 98 yards long.

The breaker and head and foot of main hoisting slope were lighted by electricity.

Indian Ridge Colliery

Tunnel to Bottom Split vein from Skidmore vein, total length 5 2-3 yards.

Indian Ridge coal now taken over new railroad to Shenandoah City breaker.

Tip house and scraper line built to scrape coal up to breaker tip.

Boiler fuel now taken in mine cars from Plank Ridge washery.

Outside stable destroyed by fire and rebuilt.

No. R slope from Surface to Top Split vein, sunk 33 yards.

New 40-ton Merion steam shovel placed at culm bank.

Draper Colliery

Installed force fan 12 feet in diameter on Seven Foot vein, to ventilate the No. 5 slope workings.

Tunnel to Skidmore vein from the Seven Foot gangway No. 4 slope level, at point 600 feet west at No. 2 tunnel, total length 12½ yards.

Gilberton Colliery

Installed a Compound Duplex pump, 12 inches and 18 inches x 14 inches, on the 5th lift.

Pump room in top rock of Buck Mountain vein west of main hoisting slope, 5th lift, total length 10 1-3 yards.

Boston Run Colliery

Tunnel to Bottom Split vein from Little Buck vein, on 4th lift, 60 feet east of underground slope, total length 107 1-3 yards.

A self-acting Barney plane, 410 feet long on 5 1-4 degree pitch, equipped with a u foot diameter grip sheave, was made in the Holmes vein, 3rd lift.

LEHIGH VALLEY COAL COMPANY

Packer No. 2 Colliery

Drilling one ten-inch hole for water, total distance 239 feet.

A tunnel, 7 feet x 10 feet, was driven 100 feet on the No. 5 level, from Skidmore to Bottom Split of Mammoth vein. A traveling way from No. 5 to No. 4 level, on an angle of 15 degrees, was driven 399 feet. New airway from No. 5 level to No. 4 level, in West Mammoth Top Split, a distance of 304 feet. Placed a 24-inch x 10 inch x 36-inch Goyne pump on No. 2 level.

Packer No. 3 Colliery

Placed at Mammoth Stripping, east of slope, a double hoisting engine, 10 x 12 inches, to handle stripping coal and coal from drift in Seven Foot vein.

Drilling a ten inch hole for water, total distance 446 feet.

A tunnel, 7 feet x 10 feet, was driven 50 feet, from West Mammoth to Skidmore No. 3 level.

Six rock chutes were driven from Skidmore to Mammoth No. 1 level, each chute a distance of 15 feet.

A breast was driven 600 feet from East Little Buck No. 2 level to surface, for ventilation.

Packer No. 4 Colliery

Built a trestle over Lehigh Valley Railroad 200 feet long, to handle refuse from breaker. Installed a saw mill to cut up reclaimed mine timber. Put into use 50 new steel frame mine cars.

A tunnel, 7 x 10 feet, was driven 154 feet from Mammoth to Seven Foot, No. 2 level. Building a triangular pillar at the bottom of the main slope, 15 feet high. Have driven 2,189 feet of gangway.

THOMAS COLLIERY COMPANY

Kehley Run Colliery

Outside.—Addition to breaker; 7 new jigs and 4 Ayres revolving picking tables; two new locomotives; heater and boiler feed pump at No. 3 slope; one pair 12 x 16-inch double hoisting engines at No. 4 or Skidmore slope; one new 8-foot fan installed at No. 3 slope.

An addition is being made to blacksmith and carpenter shop for the purpose of installing a saw and other wood working machinery; also machine lathe and drill press.

Inside.—Main slope, 12-inch hole near boiler house drilled from surface to second Buck Mountain for purpose of silting or slushing third and fourth levels of the Buck Mountain.

Rock tunnel driven from the Buck Mountain to the Seven Foot, and gangways driven east and west. Rock tunnel driven from the Skidmore to the Mammoth bed. Installed one 800-gallon pump at foot of the fourth level Buck Mountain, preparatory to the slushing. Installed new 13-inch cast iron discharge line from the first level to surface, increasing the capacity for handling water 60 per cent. over that of 1907.

No. 3 slope extended to southern line, second and third lifts started east, and second lift west started west, connected to old workings. No. 4 slope started in Skidmore vein and driven to southern line. Bore hole drilled from surface to Buck Mountain vein for the purpose of draining any water that may be encountered and conducting it to the main pumps at foot of main slope.

SUSQUEHANNA COAL COMPANY

William Penn Colliery

Thirty-nine mine cars built.

Addition of 500 horse-power B. & W. to boiler plant.

Erected concrete house for Mammoth fan; two chestnut coal jigs and two pea coal jigs.

Completed Primrose airway.

Drove 213 yards of tunnel.

Total cost of improvements for the year, $32,391.25.

BROOKWOOD COAL COMPANY

Stanton Colliery

Buck Mountain slope extended 400 feet south and second and third lifts started east. Installed one 500-gallon capacity pump and two 200 gallon capacity pumps. Rock tunnel driven from surface to Buck Mountain old water level.

MINE FOREMEN'S EXAMINATIONS

The annual examination of applicants for certificates of qualification as Mine Foremen and Assistant Mine Foremen was held at Union Hall, Pottsville, March 23 and 24.

The Board of Examiners was composed of A. B. Lamb, Mine Inspector; D. V. Randall, Superintendent, William Penn; George H. Young, Miner, Shenandoah; George W. Keller, Miner, Ashland.

The following persons passed a satisfactory examination and were granted certificates:

Assistant Mine Foremen

John Marsh, Shenandoah; Alfred J. Jones, William Penn; Samuel Yeager, Shenandoah; James White, Shenandoah.



FOURTEENTH DISTRICT

COLUMBIA AND SCHUYLKILL COUNTIES

Centralia, Pa., February 26, 1910.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor of transmitting herewith the annual report of the Fourteenth Anthracite District, for the year ending December 31, 1909.

Respectfully submitted,
JAMES A. O'DONNELL,
Inspector.

SUMMARY OF STATISTICS

Number of collieries,	11
Number of mines,	26
Number of mines in operation,	26
Number of tons of coal shipped to market,	1,955,774
Number of tons used at mines for steam and heat,	268,054
Number of tons sold to local trade and used by employes,	35,524
Number of tons produced,	2,259,352
Number of tons produced by compressed air machines,	.....
Number of tons produced by electrical machines,	.....
Number of persons employed inside of mines,	3,551
Number of persons employed outside,	2,115
Number of fatal accidents inside of mines,	8
Number of fatal accidents outside,	3
Number of non-fatal accidents inside of mines,	33
Number of non-fatal accidents outside,	12
Number of tons of coal produced per fatal accident inside,	282,419
Number of persons employed per fatal accident inside,	444
Number of persons employed per fatal accident outside,	705
Number of persons employed per non-fatal accident inside,	107
Number of persons employed per non-fatal accident outside,	176
Number of wives made widows,	6
Number of children made orphans,	17
Number of steam locomotives used inside of mines,	.....
Number of steam locomotives used outside,	28
Number of compressed air locomotives used inside,	4
Number of compressed air locomotives used outside,	.....
Number of electric motors used inside,	11
Number of electric motors used outside,	.....
Number of fans in use,	23
Number of furnaces in use,	.....
Number of gaseous mines in operation,	17
Number of non-gaseous mines in operation,	9
Number of new mines opened,	.....
Number of old mines abandoned,	.....

TABLE A

PRODUCTION OF COAL

Names of Operators	Tons
Philadelphia and Reading Coal and Iron Company,	1,069,145
Lehigh Valley Coal Company,	624,753
Midvalley Coal Company,	320,966
W. R. McTurk Coal Company,	136,011
Girard Mammoth Coal Company,	91,558
Cabin Run Coal Company,	14,365
Dreshman Coal Company,	2,554
Total,	2,259,352

Production by Counties

Schuylkill,	1,283,367
Columbia,	975,985
Total,	2,259,352

TABLE B.—Fatal and non-fatal accidents inside and outside of mines; number of tons of coal produced per accident; number of persons employed; number employed per accident

Names of Operators	Fatal Accidents			Non-Fatal Accidents			Tons of coal produced per fatal accident inside	Tons of coal produced per non-fatal accident inside	Number of employes inside	Number of employes outside	Total number of employes	Number of employes inside per fatal accident	Number of employes outside per fatal accident	Number of employes inside per non-fatal accident	Number of employes outside per non-fatal accident
	Inside	Outside	Total	Inside	Outside	Total									
Philadelphia and Reading Coal and Iron Co.,	3	2	5	13	7	20	356,381	82,242	1,811	1,154	2,965	603	577	139	165
Lehigh Valley Coal Co.,	4	1	5	11	5	16	156,188	56,795	1,013	345	1,358	253	345	92	69
Midvalley Coal Co.,	1	.....	1	6	.....	6	320,966	53,494	432	220	652	432	.....	72	.....
Girard Mammoth Coal Co.,	.....	.....	.....	1	.....	1	.....	91,558	148	182	330	.....	.....	148	.....
W. R. McTurk Coal Co.,	.....	.....	.....	2	.....	2	.....	68,005	100	159	259	.....	.....	50	.....
Miscellaneous Companies,	.....	.....	.....	.....	.....	.....	.....	.....	47	55	102	.....	.....	.....	.....
Totals and averages for district,	8	3	11	33	12	45	282,419	68,465	3,551	2,115	5,666	444	705	107	176

TABLE C.—Classification of Fatal Accidents Inside and Outside of Mines

	Months													
	January	February	March	April	May	June	July	August	September	October	November	December	Totals	Percentages
Causes of Accidents Inside														
Falls of coal,	1						1						2	25.00
Falls of roof,		1											1	12.50
Mine cars,								1					1	12.50
Explosions of gas,												1	1	12.50
Explosions of powder and dynamite,						1							1	12.50
Blasts, premature and otherwise,											1		1	12.50
Crushed at batteries,												1	1	12.50
Totals,	1	1				1	1	1			1	2	8	100.00
Causes of Accidents Outside														
Cars,				1								1	2	66.67
Machinery,								1					1	33.33
Totals,				1				1				1	3	100.00
Grand totals inside and outside,	1	1		1		1	1	2			1	3	11	

TABLE D.—Classification of Non-Fatal Accidents Inside and Outside of Mines

	Months													
	January	February	March	April	May	June	July	August	September	October	November	December	Totals	Percentages
Causes of Accidents Inside														
Falls of coal,			1	2	1	1			1			2	8	24.24
Falls of slate,					1								1	3.03
Falls of roof,	1						1				1		3	9.09
Mine cars,	1	3		2			1	1		2	2		12	36.36
Explosions of gas,										2			2	6.06
Blasts, premature and otherwise,		1											1	3.03
Crushed at batteries,					1		2				1		4	12.13
Miscellaneous,	2												2	6.06
Totals,	4	4	1	4	3	1	4	1	1	4	4	2	33	100.00
Causes of Accidents Outside														
Cars,	1									1	1		3	25.00
Machinery,			1										1	8.33
Miscellaneous,	1		1	1	1		1			2	1		8	66.67
Totals,	2		2	1	1		1			3	2		12	100.00
Grand totals inside and outside,	6	4	3	5	4	1	5	1	1	7	6	2	45	

TABLE E.—Occupations of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Inside													
Mine foremen,								1					1
Miners,		1									1	1	3
Miners' laborers,	1						1						2
Starters,						1						1	2
Totals,	1	1				1	1	1			1	2	8
Outside													
Headmen,												1	1
Oilers,								1					1
Laborers,				1									1
Totals,				1				1				1	3
Grand totals inside and outside,	1	1		1		1	1	2			1	3	11

TABLE F.—Occupations of Persons Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Inside													
Miners,		2	1	2	1		2		1	1	1	1	12
Miners' laborers,	2				2	1	1	1		1		1	9
Drivers and runners,		1		1									2
Doorboys and helpers,	1									1			2
Switchmen,		1											1
Starters,											1		1
Conductors,											1		1
Timbermen,											1		1
Rockmen,				1									1
Loaders,	1						1			1			3
Totals,	4	4	1	4	3	1	4	1	1	4	4	2	33
Outside													
Blacksmiths and carpenters,					1								1
Slatepickers (boys),										1			1
Conveyor tenders,				1									1
Jig runners,	1												1
Patchers,										1			1
Drivers and runners,											2		2
Laborers,	1		2				1			1			5
Totals,	2		2	1	1		1			3	2		12
Grand totals inside and outside,	6	4	3	5	4	1	5	1	1	7	6	2	45

TABLE G.—Nationality of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
American,						1		2				2	5
Irish,		1		1									2
Polish,	1										1		2
Italian,							1						1
Russian,												1	1
Totals,	1	1		1		1	1	2			1	3	11

TABLE H.—Nationality of Persons Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
American,	3	3	2	1	2		2			5	4	1	23
English,					1		1			1			3
Irish,								1			1		2
Polish,		1		1	1	1				1	1		6
Italian,	1			1			1						3
Lithuanian,			1						1				2
Russian,	2			2			1					1	6
Totals,	6	4	3	5	4	1	5	1	1	7	6	2	45

TABLE I.—Operators and mines, kind of openings, type and size of fans, size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents and number of persons employed inside

Names of Operators and Mines	Kind of opening	Gaseous or non-gaseous	Method of ventilation	Diameter of fan in feet and inches	Width of blades in feet and inches	Depth of blades in feet and inches	Number of revolutions per minute	Water gauge developed—in inches	Name of fan	Power used	Number of splits of air currents	Number of cubic feet of air per minute entering the mine at inlet	Total quantity of air per minute circulating in all the splits in cubic feet	Number of cubic feet per minute passing out at outlet	Number of persons employed inside
Philadelphia and Reading Coal and Iron Co.															
Hammond Colliery:															
Hammond Buck,	Slope,	Gaseous,	Fan,	15	5	4	90	1.8	Guibal,	Steam,	15	190,000	140,000	200,000	567
Hammond Mammoth,	Slope,	Gaseous,	Fan,	21	7	6	80	1.8							
Hammond Nos. 1, 2, 3 and 4,	Drifts,	Non-gas.,	Fan,	12	5	4	80	1							
Bast Colliery:															
Bast Mammoth,	Slope,	Gaseous,	2 Fans,	18	5	5	90	2	Guibal,	Steam,	12	180,000	160,000	188,000	493
Bast Nos. 1 and 2,	Drifts,	Gaseous,													
Bear Ridge Colliery:															
Bear Ridge tunnel,	Slope,	Gaseous,	Fan,	18	5	5	80	1.5	Guibal,	Steam,	8	70,000	70,000	76,000	255
Potts Colliery:															
Potts Primrose,	Slope,	Gaseous,	4 Fans,	18	6	4.5	110	2.2	Whiting,	Steam,	15	190,000	170,000	200,000	496
Potts Mammoth,	Slope,	Gaseous,													
Lehigh Valley Coal Co.															
Centralia Colliery:															
Centralia,	Slope,	Gaseous,	3 Fans,	12	4	4	80	.5	Guibal,	Steam,	7	94,000	94,000	98,000	396
				14	3.5	4	80	.8							
				15	5	5	80	.9							
Continental,	Shaft,	Gaseous,	Fan,	20	6	6.5	75	.9	Guibal,	Steam,	6	40,000	40,000	48,000	197
Packer No. 5 Colliery:															
Packer No. 1,	Drift,	Gaseous,	Fan,	16	4.5	4.5	77	.9	Guibal,	Steam,	11	83,000	83,000	86,000	178
Packer No. 5,	Shaft,	Gaseous,	Fan,	20	6	5.5	75	1.3	Guibal,	Steam,	14	100,000	100,000	110,000	235

Midvalley Coal Co.																
Midvalley Colliery:																
Midvalley No. 1.	Slope,	Gaseous,	2 Fans,	18	5.5	5	80	1.2	Vulcan,	Steam,	6	76,000	76,000	80,000	194
				16	4.5	4	70	1							
Midvalley No. 2.	Slope,	Gaseous,	Fan,	24	8	7	70	1.5	Vulcan,	Steam,	8	90,000	90,000	94,000	185
Midvalley Nos. 2 and 4,	Drifts,	Gaseous,	Fan,	6	3	2	150	.6	Sturdevant.	Steam,	2	22,000	22,000	23,000	53
W. R. McTurk Coal Co.																
Girard-Bear Ridge Colliery:																
Girard-Bear Ridge,	Slope,	Gaseous,	Fan,	12	5	4	120	1.1	Guibal,	Steam,	4	40,000	40,000	40,000	100
Girard Mammoth Coal Co.																
Girard Mammoth Colliery:																
Girard Mammoth No. 1 Buck,	Slope,	Non-gas.,	2 Fans,	6	3	2.5	120	1.5	Sturdevant.	Steam,	5	40,000	40,000	44,000	143
Girard Mammoth No. 2 Buck,	Slope,	Non-gas.,														
Girard Mammoth,	Tunnel,	Non-gas.,														
Cabin Run Coal Co.																
Cabin Run Colliery:																
Cabin Run,	Tunnel,	Non-gas.,	Natural,								2	11,000	11,000	12,000	40
Dreshman Coal Co.																
Pioneer Colliery:																
Pioneer,	Slope,	Non-gas.,	Natural,								1	10,000	10,000	11,000	7

TABLE 1.—Operators, location of collieries, railroads, etc.

Names of Operators and Collieries	County	Name of General Superintendent	Post Office	Name of Superintendent	Post Office	Railroad to Mine
Philadelphia and Reading Coal and Iron Co.						
Hammond,	Schuylkill,	W. J. Richards, General Manager.	Pottsville,	Reese Tasker,	Pottsville,	P. and R.
Bast,	Schuylkill,					
Bear Ridge,	Schuylkill,					
Potts,	Columbia,					
Lehigh Valley Coal Co.						
Centralia,	Columbia,	S. D. Warriner, General Manager.	Wilkes-Barre,	J. M. Humphrey,	Centralia,	Lehigh Valley.
Packer No. 5,	Schuylkill,					
Locust Run,	Columbia,					
Midvalley Coal Co.						
Midvalley,	Columbia,	T. E. Snyder,	Hazleton,	H. D. Kostenbauder,	Wilburton,	Lehigh Valley.
W. R. McTurk Coal Co.						
Girard-Bear Ridge,	Schuylkill	W. R. McTurk,	Philadelphia,	J. M. Holt,	Girardville,	P. and R.
Girard Mammoth Coal Co.						
Girard Mammoth,	Schuylkill			H. K. Christ,	Raven Run,	P. and R.
Cabin Run Coal Co.						
Cabin Run,	Columbia,			J. M. Lewis,	Beaver Valley,	Pennsylvania.
Dreshman Coal Co.						
Pioneer,	Schuylkill			John Dreshman,	Ashland,	

TABLE 2.--Number of tons of coal mined, number of days worked, number of persons employed, number killed and injured, quantity of powder, dynamite and so-called safety explosives used, etc.

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Explosives: Number of pounds of powder used	Explosives: Number of pounds of dynamite used	Explosives: Number of pounds of so-called safety explosives used	Number of horses and mules
Philadelphia and Reading Coal and Iron Co.													
Hammond,	Schuylkill,	307,734	36,520	7,611	351,865	214	921	1	5	39,050	80,114	63,373	46
Bast,	Schuylkill,	220,984	62,398	6,880	290,262	224	791	3	9	550	53,523	36,628	89
Bear Ridge,	Schuylkill,	133,459	17,681	1,181	152,321	224	452	1	1	17,625	31,381	1,763	51
Potts,	Columbia,	221,383	46,178	7,136	274,697	221	801	....	5	50	53,245	43,968	90
Totals,		883,560	162,777	22,808	1,069,145	.....	2,965	5	20	57,275	218,263	145,732	276
Lehigh Valley Coal Co.													
Centralia,	Columbia,	328,510	31,909	5,538	365,957	176	828	2	11	600	212,536	.....	72
Packer No. 5,	Schuylkill,	247,641	11,155	.....	258,796	176	508	3	5	57,950	65,521	.....	32
Locust Run,*	Columbia,	.....	.....	.....	.....	.....	22	.....	.....	.....	.....	.....	2
Totals,		576,151	43,064	5,538	624,753	.....	1,358	5	16	58,550	278,057	.....	106
Midvalley Coal Co.													
Midvalley,	Columbia,	281,627	36,500	2,839	320,966	212	652	1	6	46,724	127,639	.....	95
W. R. McTurk Coal Co.													
Girard-Bear Ridge,	Schuylkill,	122,515	13,413	83	136,011	249	259	....	2	2,875	27,325	.....	29
Girard Mammoth Coal Co.													
Girard Mammoth,	Schuylkill,	80,756	10,000	802	91,558	143	330	....	1	25,825	16,496	.....	25

*Pumping station.

TABLE 2—Continued

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Explosives			Number of horses and mules
										Number of pounds of powder used	Number of pounds of dynamite used	Number of pounds of so-called safety explosives used	
Cabin Run Coal Co.													
Cabin Run,	Columbia,	11,165	2,000	1,200	14,365	219	90	....	....	1,225	6,200	250	4
Dreshman Coal Co.													
Pioneer,	Schuylkill,	.....	300	2,254	2,554	186	12	....	....	.....	1,000	.....	3
Grand totals,		1,955,774	268,054	35,524	2,259,352	.....	5,666	11	45	192,474	674,980	145,982	538

TABLE 2.—Part 2.

Names of Operators	County	Number of Boilers					Locomotives			Number of steam engines of all classes	Total horse power	Number of pumps delivering water to surface	Capacity in gallons per minute	Quantity delivered to surface per minute—gallons	Number of electric dynamos	Number of air compressors
		Cylindrical	Horse power	Tubular	Horse power	Total horse power	Steam	Air	Electric							
Philadelphia and Reading Coal and Iron Co.,	Schuylkill, Columbia,	24	876	52	6,500	7,376	7	4	------	53	8,840	12	11,490	4,435	----	3
Lehigh Valley Coal Co.,	Schuylkill, Columbia,	15	555	25	3,900	4,455	4	------	11	63	7,935	5	8,648	4,346	2	1
Midvalley Coal Co.,	Columbia,	----	----	16	3,000	3,000	10	------	------	10	889	7	7,830	7,830	----	1
W. R. McTurk Coal Co.,	Schuylkill,	----	----	9	1,312	1,312	3	------	------	13	995	----	----	----	----	----
Girard Mammoth Coal Co.,	Schuylkill,	----	----	4	500	500	4	------	------	4	100	3	3,000	2,000	----	----
Cabin Run Coal Co.,	Columbia,	----	----	4	440	440	------	------	------	4	210	----	----	----	1	----
Dreshman Coal Co.,	Schuylkill,	----	----	2	130	130	------	------	------	2	80	----	----	----	----	----
Totals,		39	1,431	112	15,782	17,213	28	4	11	149	19,049	27	30,968	18,611	3	5

TABLE 3.—Number of each class of employes inside and outside of mines

Names of Operators	County	Inside												Outside									Grand total inside and outside
		Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Doorboys and helpers	Pumpmen	Company men	All other employes	Total inside	Superintendents	Foremen	Blacksmiths and carpenters	Engineers and firemen	Slate pickers (boys)	Slate pickers (men)	Bookkeepers and clerks	All other employes	Total outside	
Philadelphia and Reading Coal and Iron Co.,	Schuylkill, Columbia,	6	28	----	442	249	118	74	12	444	438	1,811	----	9	39	112	203	68	14	709	1,154	2,965
Lehigh Valley Coal Co.,	Schuylkill, Columbia,	6	17	2	276	277	54	20	6	------	355	1,013	..	5	29	52	17	3	4	235	345	1,358
Midvalley Coal Co.,	Columbia,	2	2	6	158	143	44	6	6	65	------	432	1	2	16	24	30	15	4	128	220	652
W. R. McTurk Coal Co.,	Schuylkill,	1	----	1	34	23	7	6	------	2	26	100	1	1	6	11	41	1	2	96	159	259
Girard Mammoth Coal Co.,	Schuylkill,	2	1	----	25	40	10	2	4	44	20	148	1	----	7	14	40	12	2	106	182	330
Cabin Run Coal Co.,	Columbia,	1	----	----	16	16	1	------	------	2	4	40	1	1	4	6	7	4	2	25	50	90
Dreshman Coal Co.,	Schuylkill,	1	----	----	3	1	2	------	------	------	------	7	----	----	----	1	1	------	------	3	5	12
Totals,		19	48	9	954	749	236	108	28	557	843	3,551	4	18	101	220	339	103	28	1,302	2,115	5,666

TABLE 3.—Part 2

Names of Operators	County	Average Number of Days Worked in Breaker												
		January	February	March	April	May	June	July	August	September	October	November	December	Total
Philadelphia and Reading Coal and Iron Co.,	Columbia and Schuylkill,	20	15	25	22	17	14	12	14	15	21	24	22	221
Lehigh Valley Coal Co.,	Columbia and Schuylkill,	19	14	19	21	14	15	10	5	9	9	22	19	176
Midvalley Coal Co.,	Columbia,	20	18	23	22	18	18	11	5	15	17	23	22	212
W. R. McTurk Coal Co.,	Schuylkill,	20	17	25	21	17	25	20	19	24	24	15	22	249
Girard Mammoth Coal Co.,	Schuylkill,	24	19	24	19	9	15	8	9	16	----	----	----	143
Cabin Run Coal Co.,	Columbia,	8	16	25	23	20	14	9	16	24	15	24	25	219
Dreshman Coal Co.,	Schuylkill,	20	17	18	17	16	11	17	15	11	13	14	17	186

TABLE 4.—Fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Colliery	County	Nature and Cause of Accident in Brief
Jan. 22	Fank Oakruski,	Polish,	Laborer,	21	S.			Midvalley,	Columbia,	Killed by fall of coal at the face of gangway while making a hitch for timber.
Feb. 6	Patrick McIntyre,	Irish,	Miner,	45	M.	1	3	Packer No. 5,	Schuylkill,	Killed by fall of rock while working at face of his breast.
April 23	John Landers,	Irish,	Laborer,	60	S.			Hammond,	Schuylkill,	Killed by being run over by cars under the breaker. Outside.
June 16	Martin Seanor,	American,	Starter,	45	M.	1	5	Bast,	Schuylkill,	Killed by a dynamite blast at battery.
July 19	Anthony Frank,	Italian,	Laborer,	28	S.			Packer No. 5,	Schuylkill,	Killed by fall of coal where the gangway was being skipped to make a turnout.
Aug. 11	William Becker,	American,	Oiler,	24	S.			Bear Ridge,	Schuylkill,	Killed by falling against a rope wheel of a scraper line. Outside.
30	August F. Henke,	American,	Inside foreman.	44	M.	1	1	Bast,	Schuylkill,	Killed by being squeezed between accommodation cars at bottom of slope.
Nov. 29	Joseph Gowel,	Polish,	Miner,	42	M.	1	1	Centralia,	Columbia,	Killed by a premature blast at the face of his breast.
Dec. 1	Stiney Wayconis,	Russian,	Miner,	23	S.			Packer No. 5,	Schuylkill,	Killed while starting a battery. The drill that he was using struck him on the head.
10	David Conrad,	American,	Headman,	39	M.	1	6	Centralia,	Columbia,	Killed by gunboat. He was under the gunboat oiling it, on the top of the breaker when it started, crushing him. Outside.
21	William Schultz,	American,	Starter,	33	M.	1	1	Bast,	Schuylkill,	Killed by being blown from a chute to the gangway by concussion of air from an explosion of gas.

TABLE 5.—Non-fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Colliery	County	Nature and Cause of Accident in Brief
Jan. 9	Joseph Mucklow,	American,	Door tender,	17	S.	Bear Ridge,	Schuylkill,	Skull fractured by cars at bottom of slope.
12	Frank Baldick,	Italian,	Laborer,	42	M.	Bast,	Schuylkill,	Leg fractured by cars. Outside.
	Patrick Cuff,	American,	Loader,	22	S.	Centralia,	Columbia,	Toes fractured by coal falling off car on him.
19	Peter Kaeder,	Russian,	Laborer,	48	M.	Packer No. 5,	Schuylkill,	Leg fractured by timber rolling on him.
22	William Kull,	American,	Jig runner,	19	S.	Potts,	Columbia,	Elbow dislocated by falling in breaker. Outside.
23	Toney Doshamick,	Russian,	Laborer,	25	M.	Centralia,	Columbia,	Leg fractured by fall of rock at face of gangway.
Feb. 11	Lawrence Welsh,	American,	Miner,	28	S.	Bast,	Schuylkill,	Head and face lacerated by premature blast.
	James Ryan,	American,	Driver,	18	S.	Hammond,	Schuylkill,	Arm crushed by cars along gangway.
18	Leo Wilcheck,	Polish,	Miner,	26	M.	Girard Mammoth,	Schuylkill,	Collar bone fractured by cars at face of gangway.
23	John Tallot,	American,	Switchman,	23	S.	Hammond,	Schuylkill,	Leg fractured by cars on turnout.
March 1	Wash Smith,	American,	Laborer,	64	M.	Centralia,	Columbia,	Body bruised by timber falling on him. Outside.
25	Joseph O'Brine,	American,	Laborer,	18	S.	Bast,	Schuylkill,	Wrist fractured by rope wheel. Outside.
29	Matt Kregas,	Lithuanian,	Miner,	31	M.	Girard–Bear Ridge,	Schuylkill,	Ribs fractured by fall of coal in a cross-heading.
April 2	Anthony Bicoskie,	Russian,	Miner,	35	S.	Packer No. 5,	Schuylkill,	Hip dislocated by fall of coal at face of breast.
8	John Berger,	Polish,	Driver,	26	S.	Midvalley,	Columbia,	Arm fractured by car door falling on him.
10	Michael Dutko,	Russian,	Miner,	30	M.	Midvalley,	Columbia,	Arm fractured by fall of coal at face of breast.
29	William Bye,	American,	Conveyor tender,	19	S.	Potts,	Columbia,	Head and body bruised by falling off trestle. Outside.
30	Vinc Manganel,	Italian,	Rockman,	26	S.	Bast,	Schuylkill,	Leg and arm fractured by cars along gangway.

TABLE 5—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Colliery	County	Nature and Cause of Accident in Brief
May 18	Patrick Coalman,	American,	Laborer,	27	M.	Girard-Bear Ridge,	Schuylkill,	Hand crushed in battery.
	Elwood Tiley,	American,	Carpenter,	24	S.	Packer No. 5,	Schuylkill,	Hip bruised by falling off car. Outside.
28	Alex. Wilcuskie,	Polish,	Laborer,	26	M.	Midvalley,	Columbia,	Pelvis fractured by fall of slate at face of gangway.
	James Cartwright,	English,	Miner,	45	M.	Midvalley,	Columbia,	Foot fractured by fall of coal at face of breast.
June 3	Joe Comermetski,	Polish,	Laborer,	25	S.	Centralia,	Columbia,	Ankle fractured by fall of coal at face of breast.
July 9	Thomas Carter,	English,	Loader boss,	37	M.	Hammond,	Schuylkill,	Pelvis fractured by cars on gangway.
12	Patrick McGinley,	American,	Miner,	25	M.	Midvalley,	Columbia,	Foot fractured in battery.
27	Joe Bocanavage,	Russian,	Miner,	36	M.	Packer No. 5,	Schuylkill,	Collar bone fractured in battery.
28	Harry Shutt,	American,	Laborer,	40	S.	Potts,	Columbia,	Finger cut off while unloading rails. Outside.
29	Alec Gedro,	Italian,	Laborer,	21	S.	Centralia,	Columbia,	Leg fractured by fall of rock at face of breast.
Aug. 11	John McDonald,	Irish,	Laborer,	60	M.	Hammond,	Schuylkill,	Ankle fractured by cars on gangway.
Sept. 16	Anthony Sedar,	Lithuanian,	Miner,	28	M.	Hammond,	Schuylkill,	Leg fractured by fall of coal at face of breast.
Oct. 5	Joseph Dean,	American,	Loader,	22	S.	Packer No. 5,	Schuylkill,	Leg crushed by cars on gangway and had to be amputated.
5	Charles Heist,	American,	Patcher,	15	S.	Centralia,	Columbia,	Thumb crushed by cars on rock bank. Outside.
13	Patrick Sheeran,	American,	Laborer,	65	M.	Centralia,	Columbia,	Ribs fractured by falling. Outside.
21	Robert Allen,	English,	Miner,	60	M.	Bast,	Schuylkill,	Face and hands burned by explosion of gas.
	Stanley Garkoskie,	Polish,	Laborer,	25	S.			
	Rudolph Raber,	American,	Slate picker,	16	S.	Potts,	Columbia,	Ribs fractured by falling in breaker. Outside.
27	Charles Pectal,	American,	Door tender,	18	S.	Potts,	Columbia,	Leg crushed by cars along gangway.
Nov. 11	George Cobbent,	American,	Starter,	24	S.	Bast,	Schuylkill,	Arm fractured in battery.
16	Andrew Kenney,	American,	Car runner,	17	S.	Centralia,	Columbia,	Foot fractured by chute weight falling on him. Outside.

Nov.	18	Patrick Narcy,	Irish,	Timberman,	47	M.	Bast,	Schuylkill,	Leg fractured by cars along gangway.
	22	Cornelis Callahan,	American,	Conductor,	18	S.	Centralia,	Columbia,	Foot fractured by cars along gangway.
	24	John Kishko,	Polish,	Miner,	54	M.	Midvalley,	Columbia,	Pelvis fractured by fall of rock at face of breast.
	29	Peter Hartenstine,	American,	Driver,	18	S.	Bast,	Schuylkill,	Leg fractured by cars. Outside.
Dec.	10	William Mottor,	American,	Miner,	32	M.	Centralia,	Columbia,	Leg fractured by fall of coal at face of gangway.
		Michael Cranage,	Russian,	Laborer,	33	M.	Centralia,	Columbia,	Head and body lacerated by fall of coal at face of gangway.

CONDITION OF COLLIERIES

PHILADELPHIA AND READING COAL AND IRON COMPANY

Hammond.—Ventilation good; roads and drainage good. Condition as to safety, good.

Bast.—Ventilation good; roads and drainage good. Condition as to safety good.

Potts.—Ventilation good; roads and drainage good. Condition as to safety, good.

Bear Ridge.—Ventilation good; roads and drainage good. Condition as to safety, good.

LEHIGH VALLEY COAL COMPANY

Centralia.—Ventilation good; roads and drainage good. Condition as to safety, good.

Packer No. 5.—Ventilation good; roads and drainage good. Condition as to safety,good.

Locust Run.—Ventilation good; roads and drainage good. Condition as to safety, good.

MIDVALLEY COAL COMPANY

Midvalley.—Ventilation good; roads and drainage fair. Condition as to safety, good.

GIRARD MAMMOTH COAL COMPANY

Girard Mammoth.—Ventilation fair; roads and drainage good. Condition as to safety, good.

W. R. McTURK COAL COMPANY

Girard-Bear Ridge.—Ventilation fair; roads and drainage fair. Condition as to safety, good.

CABIN RUN COAL COMPANY

Cabin Run.—Ventilation fair; roads and drainage fair. Condition as to safety, good.

DRESHMAN COAL COMPANY

Pioneer.—Ventilation good; roads and drainage fair. Condition as to safety, good.

IMPROVEMENTS

Girard Mammoth Coal Company has completed the erection of a new breaker during the year. It contains 850,000 feet of hemlock timber and has a frontage of 80 feet, depth of 200 feet and average height of 110 feet. Two engines—one 14 x 36 inches and one 18 x 16

inches, are coupled and work satisfactorily. Twelve Christ jigs have been installed, three each for egg, stove, chestnut and pea. Two screens have been installed, one 20 feet x 6 feet for egg and broken, and one 24 feet x 5 feet with a jacket, making it 6 feet 6 inches. Seven sets of rolls are in operation and fourteen shakers are used—one for broken and steamboat, one for egg, two for stove, two for chestnut, two for pea, two for buck, two for rice and two for barley. Two lines 54-inch triple gear convey the coal assembled near the top of slope to the top of the breaker. The counter hopper is large enough to hold sixty tons of slate and rock. All refuse is removed from breaker by a 36-inch x 300 foot conveyor. Machinery is all operated by the American system of rope drives.

MINE FOREMEN'S EXAMINATIONS

The annual examination of applicants for certificates of qualification as mine foremen and assistant mine foremen was held in Union Hall, Pottsville, March 23 and 24. The Board of Examiners was composed of the following members: James A. O'Donnell, Mine Inspector, Centralia; T. E. Snyder, Superintendent, Wilburton; John Coolahan, Miner, Ashland; Patrick Curran, Miner, Centralia.

The following persons passed a satisfactory examination and were granted certificates:

Assistant Mine Foremen

Patrick H. Scanlon, Ashland; Owen L. Corrigan, Locust Dale.



FIFTEENTH DISTRICT

NORTHUMBERLAND COUNTY

Mount Carmel, Pa., February 24, 1910.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor of transmitting herewith my annual report as Inspector of Mines of the Fifteenth Anthracite District, for the year ending December 31, 1909.

Respectfully submitted,

BENJAMIN I. EVANS,
Inspector.

SUMMARY OF STATISTICS

Number of collieries,	11
Number of mines,	31
Number of mines in operation,	31
Number of tons of coal shipped to market,	2,444,995
Number of tons used at mines for steam and heat,	336,235
Number of tons sold to local trade and used by employes,	41,773
Number of tons produced,	2,823,003
Number of tons produced by compressed air machines,	.....
Number of tons produced by electrical machines,	.....
Number of persons employed inside of mines,	5,550
Number of persons employed outside,	2,370
Number of fatal accidents inside of mines,	27
Number of fatal accidents outside,	2
Number of non-fatal accidents inside of mines,	14
Number of non-fatal accidents outside,	2
Number of tons of coal produced per fatal accident inside,	104,555
Number of persons employed per fatal accident inside,	205
Number of persons employed per fatal accident outside,	1,185
Number of persons employed per non-fatal accident inside,	396
Number of persons employed per non-fatal accident outside,	1,185
Number of wives made widows,	15
Number of children made orphans,	29
Number of steam locomotives used inside of mines,	.....
Number of steam locomotives used outside,	19
Number of compressed air locomotives used inside,	3
Number of compressed air locomotives used outside,	.....
Number of electric motors used inside,	12
Number of electric motors used outside,	.....
Number of fans in use,	31
Number of furnaces in use,	.....
Number of gaseous mines in operation,	13
Number of non-gaseous mines in operation,	18
Number of new mines opened,	.....
Number of old mines abandoned,	.....

TABLE A

PRODUCTION OF COAL

Names of Operators	Tons
Philadelphia and Reading Coal and Iron Company,	1,124,121
Mineral Railroad and Mining Company,	772,252
Lehigh Valley Coal Company,	279,538
Greenough Red Ash Coal Company,	233,951
Colonial Collieries Company,	200,834
Enterprise Coal Company,	121,425
Excelsior Coal Company,	90,882
Total,	2,823,003

Production by Counties

Northumberland,	2,823,003

TABLE B.—Fatal and non-fatal accidents inside and outside of mines; number of tons of coal produced per accident; number of persons employed; number employed per accident

Names of Operators	Fatal Accidents			Non-Fatal Accidents			Tons of coal produced per fatal accident inside	Tons of coal produced per non-fatal accident inside	Number of employes inside	Number of employes outside	Total number of employes	Number of employes inside per fatal accident	Number of employes outside per fatal accident	Number of employes inside per non-fatal accident	Number of employes outside per non-fatal accident
	Inside	Outside	Total	Inside	Outside	Total									
Philadelphia and Reading Coal and Iron Co.,	8	2	10	7	1	8	140,515	160,589	2,107	822	2,929	263	411	301	822
Mineral Railroad and Mining Co.,	14	.....	14	5	1	6	55,161	154,450	1,774	757	2,531	127	.....	355	757
Lehigh Valley Coal Co.,	1	.....	1	1	.....	1	279,538	279,538	603	158	761	603	.....	603	.....
Greenough Red Ash Coal Co.,	.....	.....	.....	1	.....	1	.....	233,951	377	175	552	.....	.....	377	.....
Colonial Collieries Co.,	3	.....	3	.....	.....	.....	66,945	.....	222	142	364	74	.....	.....	.....
Enterprise Coal Co.,	1	.....	1	.....	.....	.....	121,425	.....	331	228	559	331	.....	.....	.....
Miscellaneous Companies,	.....	.....	.....	.....	.....	.....	.....	.....	136	88	224	.....	.....	.....	.....
Totals and averages for district,	27	2	29	14	2	16	104,555	201,643	5,550	2,370	7,920	205	1,185	396	1,185

TABLE C.—Classification of Fatal Accidents Inside and Outside of Mines

	Months													
	January	February	March	April	May	June	July	August	September	October	November	December	Totals	Percentages
Causes of Accidents Inside														
Falls of coal,		2		1				2	1				6	22.23
Falls of slate,	1			1	1	1		1				3	8	29.63
Mine cars,	3				1					1			5	18.52
Explosions of gas,						2		1					3	11.11
Blasts, premature and otherwise,			1										1	3.70
Falling into slopes, etc.,		1								1			2	7.41
Mules,							1						1	3.70
Miscellaneous,											1		1	3.70
Totals,	4	3	1	2	2	3	1	4	1	2	1	3	27	100.00
Causes of Accidents Outside														
Machinery,												1	1	50.00
Miscellaneous,												1	1	50.00
Totals,												2	2	100.00
Grand totals inside and outside,	4	3	1	2	2	3	1	4	1	2	1	5	29	

TABLE D.—Classification of Non-Fatal Accidents Inside and Outside of Mines

	Months													
	January	February	March	April	May	June	July	August	September	October	November	December	Totals	Percentages
Causes of Accidents Inside														
Falls of coal,			1								1		2	15.38
Falls of slate,				1							1		2	15.38
Mine cars,					1			2					3	23.08
Explosions of gas,						1					1		2	15.38
Explosions of powder and dynamite,					1								1	7.70
Blasts, premature and otherwise,							1				1		2	15.38
Miscellaneous,									1				1	7.70
Totals,			1	1	2	1	1	2	1		4		13	100.00
Causes of Accidents Outside														
Cars,			1										1	33.33
Machinery,		1											1	33.33
Miscellaneous,				1									1	33.34
Totals,		1	1	1									3	100.00
Grand totals inside and outside,		1	2	2	3	1	1	2	1		4		16	

TABLE E.—Occupations of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Inside													
Miners,	3	3	1	....	1	2	....	3	1	1	1	2	18
Miners laborers,	....	....	....	1	....	1	....	1	....	....	....	1	4
Drivers and runners,	1	....	....	1	....	....	1	....	....	....	....	....	3
Doorboys and helpers,	....	....	....	....	....	....	....	....	....	1	....	....	1
Motormen,	....	....	....	....	1	....	....	....	....	....	....	....	1
Totals,	4	3	1	2	2	3	1	4	1	2	1	3	27
Outside													
Laborers,	....	....	....	....	....	....	....	....	....	....	....	2	2
Totals,	....	....	....	....	....	....	....	....	....	....	....	2	2
Grand totals inside and outside,	4	3	1	2	2	3	1	4	1	2	1	5	29

TABLE F.—Occupations of Persons Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Inside													
Fire bosses and assistants,	....	....	....	....	1	....	....	1	....	....	....	....	2
Miners,	....	....	1	....	1	1	1	....	....	....	4	....	8
Drivers and runners,	....	....	....	....	....	....	....	1	....	....	....	....	1
Bottom men,	....	....	....	....	....	....	....	....	1	....	....	....	1
Loaders,	....	....	....	1	....	....	....	....	....	....	....	....	1
Totals,	....	....	1	1	2	1	1	2	1	....	4	....	13
Outside													
Conveyor tenders,	....	1	....	....	....	....	....	....	....	....	....	....	1
Bottom men,	....	....	1	....	....	....	....	....	....	....	....	....	1
Laborers,	....	....	....	1	....	....	....	....	....	....	....	....	1
Totals,	....	1	1	1	....	....	....	....	....	....	....	....	3
Grand totals inside and outside,	....	1	2	2	2	1	1	2	1	....	4	....	16

TABLE G.—Nationality of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
American,	1			1	1	1				1			5
English,								2					2
Welsh,	1												1
Irish,									1			1	2
German,								1					1
Polish,	2	1	1	1	1	2	1	1			1	2	13
Italian,		1								1		1	3
Austrian,		1											1
Tyrolean,												1	1
Totals,	4	3	1	2	2	3	1	4	1	2	1	5	29

TABLE H.—Nationality of Persons Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
American,		1	1		1			2			1		6
Welsh,			1										1
Irish,									1				1
Polish,				1	1	1	1				2		6
Slavonian,				1									1
Lithuanian,											1		1
Totals,		1	2	2	2	1	1	2	1		4		16

TABLE I.—Operators and mines, kind of openings, type and size of fans, size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents and number of persons employed inside

Names of Operators and Mines	Kind of opening	Gaseous or non-gaseous	Method of ventilation	Diameter of fan in feet and inches	Width of blades in feet and inches	Depth of blades in feet and inches	Number of revolutions per minute	Water gauge developed—in inches	Name of fan	Power used	Number of splits of air currents	Number of cubic feet of air per minute entering the mine at inlet	Total quantity of air per minute circulating in all the splits in cubic feet	Number of cubic feet per minute passing out at outlet	Number of persons employed inside
Philadelphia and Reading Coal and Iron Co.															
Locust Spring Colliery:															
Locust Spring, East,	Slope,	Gaseous,	Fan,	15	4	3.6	98	1.6	Guibal,		8	41,695	40,995	43,035	
Locust Spring,	Shaft,	Gaseous,	Fan,	21	5.6	5.6	98	1.6	Reading,		10	60,925	60,775	61,620	531
Locust Spring, West,	Slope,	Gaseous,	Fan,	12	4	3.6	90	.4	Guibal,	Steam,	7	30,110	30,110	32,000	
Locust Gap, East,	Slope,	Gaseous,	Fan,	21	5	4.6	70	1.2	Guibal,		10	126,090	126,000	128,080	
Locust Gap, West,	Slope,	Non-gas.,	Fan,	12	4	3.6	90	.4	Guibal,		5	30,605	30,605	32,000	490
Locust Gap, Buck Mountain,	Slope,	Non-gas.,	Fan,	12	4	3.6	80	.3	Reading,		2	9,000	9,000	9,500	
Alaska Colliery:															
Alaska No. 1,	Shaft,	Non-gas.,	Fan,	18	4.8	5	90	1.7	Guibal,	Steam,	5	67,814	60,798	70,248	655
Alaska No. 2,	Shaft,	Non-gas.,	Fan,	18	7	6.5	85	1.4	Guibal,	Steam,	6	60,907	57,009	62,970	
Reliance Colliery:															
Reliance No. 1,	Slope,	Non-gas.,	Fan,	18	5.6	5.6	74	1.2	Guibal,	Steam,	7	50,744	50,744	60,713	431
Reliance No. 2,	Slope,	Non-gas.,	Fan,	18	5.6	5.6	76	1.2	Guibal,	Steam,	8	58,249	58,249	59,000	
Mineral Railroad and Mining Co.															
Pennsylvania Colliery:															
Pennsylvania No. 1,	Slope,	Gaseous,	Fan,	21	3.5	3.5	70	1.2	Vulcan,		7	50,270	50,370	51,000	
Pennsylvania No. 4,	Slope,	Gaseous,	Fan,	16	4.5	4.1	85	.7	Mullen,	Steam,	7	38,670	36,000	39,500	713
Pennsylvania No. 5,	Slope,	Gaseous,	Fan,	16	6.3	5.9	85	1.5	Mullen,		4	20,400	20,400	21,000	

Richards Colliery:																
Richards N. Dip,	Slope,	---	Gaseous,	Fan,	20	7	6	84	1.8	Vulcan,	Steam,	6	75,000	75,000	75,364	697
Richards S. Dip,	Slope,	---	Gaseous,	Fan,	20	7	6	98	1.8	Mullen,		5	54,060	54,060	55,000	
Richards No. 4,	Slope,	---	Non-gas.,	Fan,	16	4.5	4.5	94	1.8	Mullen,		5	53,086	48,345	54,000	
Richards No. 5,	Slope,	---	Non-gas.,	Fan,	12	4.5	2	80	.8	Mullen,		2	19,600	17,500	20,450	
Scott Colliery:																
Scott,	Shaft,	--	Gaseous,	Fan,	18	5	5	92	1.7	Mullen,	Steam,	4	110,086	110,006	111,740	364
Lehigh Valley Coal Co.																
Sayre Colliery:																
Sayre,	Shaft,	--	Gaseous,	Fan,	20	6	5.6	60	1			6	53,585	53,650	54,000	
Sioux No. 1,	Slope,	---	Gaseous,	Fan,	16	6	5	80	.8	Guibal,	Steam,	4	35,000	35,000	35,500	603
Sioux No. 3,	Slope,	---	Gaseous,	Fan,	16	5	5	90	.7			10	72,000	72,000	73,740	
Enterprise Coal Co.																
Enterprise Colliery:																
Enterprise No. 3,	Slope,	---	Non-gas.,	Fan,	14	3.5	5	90	1.5			4	47,215	47,215	47,390	
Enterprise No. 10,	Shaft,	--	Non-gas.,	Fan,	14	3.5	5	120	1.7	Guibal,	Steam,	4	50,360	50,360	51,000	331
Enterprise,	Slope,	---	Non-gas.,	Fan,	14	4.5	5	90	1.1			3	45,752	45,752	47,840	
Greenough Red Ash Coal Co.																
Greenough Colliery:																
Greenough No. 1,	Shaft,	--	Non-gas.,	Fan,	15	5	4	120	2.4			5	47,100	47,100	48,190	
Greenough No. 2,	Shaft,	--	Non-gas.,	Fan,	12	4	4	80	.7	Mullen,	Steam,	4	22,000	22,000	22,900	377
Greenough No. 3,	Slope,	---	Non-gas.,	Fan,	12	4	4	52	.7			1	15,300	15,300	15,900	
Colonial Collieries Co.																
Natalie Colliery:																
Natalie No. 1,	Slope,	---	Non-gas.,	Fan,	16	4	4.6	60	1.3	Vulcan,	Steam,	2	34,940	31,670	35,100	
Natalie No. 2,	Slope,	---	Non-gas.,	Fan,	16	4	4.5	50	.9	Mullen,		3	39,924	37,100	40,640	222
Natalie No. 3,	Slope,	---	Non-gas.,	Fan,	16	4	5	45	1.7	Vulcan,		3	29,640	27,500	31,000	
Excelsior Coal Co.																
Excelsior Colliery:																
Excelsior,	Drift,	---	Non-gas.,	Fan,	14	3.8	5	65	1.3	Beadle,	Steam,	3	32,500	30,740	33,000	136

TABLE 1.—Operators, location of collieries, railroads, etc.

Names of Operators and Collieries	County	Name of General Superintendent	Post Office	Name of Superintendent	Post Office	Railroad to Mine
Philadelphia and Reading Coal and Iron Co. Locust Spring, Locust Gap, Alaska, Reliance, Locust Spring Washery,	Northumberland,	W. J. Richards,	Pottsville,	Reese Tasker,	Pottsville,	Philadelphia and Reading.
Mineral Railroad and Mining Co. Pennsylvania, Richards, Scott,	Northumberland,	R. A. Quinn,	Wilkes-Barre,	W. R. Reinhardt,	Shamokin,	Pennsylvania.
Lehigh Valley Coal Co. Sayre,	Northumberland,	S. D. Warriner,	Wilkes-Barre,	J. M. Humphrey,	Centralia,	Lehigh Valley.
Greenough Red Ash Coal Co. Greenough,	Northumberland,	Edward Brennan,	Shamokin,			Pennsylvania.
Colonial Collieries Co. Natalie,	Northumberland,	F. A. Hill,	Pottsville,			Philadelphia and Reading.
Enterprise Coal Co. Enterprise,	Northumberland,	W. L. Connell,	Scranton,			Philadelphia and Reading.
Excelsior Coal Co. Excelsior,	Northumberland,	Andrew Robertson,	Pottsville,	A. D. Robertson,	Shamokin,	Philadelphia and Reading.

TABLE 2.—Number of tons of coal mined, number of days worked, number of persons employed, number killed and injured, quantity of powder, dynamite and so-called safety explosives used, etc.

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Explosives			Number of horses and mules
										Number of pounds of powder used	Number of pounds of dynamite used	Number of pounds of so-called safety explosives used	
Philadelphia and Reading Coal and Iron Co.													
Locust Spring,	Northumberland,	445,499	76,676	2,620	524,795	212	875	1	1	47,050	78,964	35,459	120
Locust Gap,		----------	10,696	----------	10,696		490	5	4	114,850	68,071	----------	----------
Alaska,		269,649	22,549	84	292,282	216	876	4	----	220,075	72,309	----------	72
Reliance,		196,433	23,728	21,561	241,722	213	597	----	3	72,025	126,548	50	59
Locust Spring Washery,		54,626	----------	----------	54,626	212	91	----	----	----------	180	----------	----------
Totals,		966,207	133,649	24,265	1,124,121	------	2,929	10	8	454,000	346,072	35,509	251
Mineral Railroad and Mining Co.													
Pennsylvania,	Northumberland,	264,139	26,420	11,191	301,750	213	999	5	1	219,600	54,455	----------	119
Richards,		262,513	28,590	88	291,191	212	1,035	6	5	121,650	130,861	----------	97
Scott,		160,470	18,680	161	179,311	173	497	3	----	85,175	72,701	----------	32
Totals,		687,122	73,690	11,440	772,252	------	2,531	14	6	426,425	258,017	----------	248
Lehigh Valley Coal Co.													
Sayre,	Northumberland,	234,692	44,142	704	279,538	178	761	1	1	44,804	135,657	----------	48
Greenough Red Ash Coal Co.													
Greenough,	Northumberland,	212,475	18,000	3,476	233,951	243	552	----	1	132,570	29,400	----------	60
Colonial Collieries Co.													
Natalie,	Northumberland,	179,866	19,714	1,254	200,834	267	364	3	----	80,000	8,350	----------	39

TABLE 2—Continued

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Explosives			Number of horses and mules
										Number of pounds of powder used	Number of pounds of dynamite used	Number of pounds of so-called safety explosives used	
Enterprise Coal Co.													
Enterprise,	Northumberland,	81,888	39,250	287	121,425	173	559	1	....	86,925	3,952	.....	53
Excelsior Coal Co.													
Excelsior,	Northumberland,	82,745	7,790	347	90,882	163	224	....	....	11,875	8,450	.....	27
Grand totals,		2,444,995	336,235	41,773	2,823,003	.....	7,920	29	16	1,236,599	789,898	35,509	721

TABLE 2.--Part 2.

Names of Operators	County	Number of Boilers					Locomotives			Number of steam engines of all classes	Total horse power	Number of pumps delivering water to surface	Capacity in gallons per minute	Quantity delivered to surface per minute—gallons	Number of electric dynamos	Number of air compressors
		Cylindrical	Horse power	Tubular	Horse power	Total horse power	Steam	Air	Electric							
Philadelphia and Reading Coal and Iron Co.,	Northumberland,	----	----	52	7,470	7,470	7	3	----	64	13,604	13	15,850	5,570	----	8
Mineral Railroad and Mining Co.,		----	----	48	6,800	6,800	5	----	2	57	7,125	15	12,856	2,492	1	2
Lehigh Valley Coal Co.,		----	----	11	2,900	2,900	3	----	5	43	2,752	8	10,360	7,650	1	1
Greenough Red Ash Coal Co.,		----	----	8	1,300	1,300	----	----	1	13	650	2	1,700	1,700	1	1
Colonial Collieries Co.,		----	----	11	1,700	1,700	2	----	----	11	1,650	3	1,400	1,400	----	----
Enterprise Coal Co.,		----	----	10	2,500	2,500	----	----	4	12	1,278	2	3,274	3,274	2	2
Excelsior Coal Co.,		12	360	2	150	510	2	----	----	7	241	----	600	400	----	----
Totals,		12	360	142	22,820	23,180	19	3	12	207	27,300	43	46,040	22,486	5	14

TABLE 3.—Number of each class of employes inside and outside of mines

Names of Operators	County	Inside											Outside									Grand total inside and outside
		Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Doorboys and helpers	Pumpmen	Company men	All other employes	Total inside	Superintendents	Foremen	Blacksmiths and carpenters	Engineers and firemen	Slate pickers (boys)	Slate pickers (men)	Bookkeepers and clerks	All other employes	Total outside	
Philadelphia and Reading Coal and Iron Co.,	Northumberland,	6	28	....	1,036	187	153	30	15	230	422	2,107	....	8	36	110	158	32	14	464	822	2,929
Mineral Railroad and Mining Co.,		4	6	27	789	349	112	21	18	56	392	1,774	1	3	60	100	243	34	21	295	757	2,531
Lehigh Valley Coal Co.,		1	11	....	208	151	17	6	11	.....	198	603	1	3	14	25	13	....	2	100	158	761
Greenough Red Ash Coal Co.,		1	6	....	156	65	58	4	4	31	52	377	1	1	7	17	88	....	3	58	175	552
Colonial Collieries Co.,		1	2	....	72	85	20	6	5	31	.....	222	....	1	8	24	18	16	2	73	142	364
Enterprise Coal Co.,		1	1	....	189	32	44	2	7	27	28	331	1	2	8	33	38	28	3	115	228	559
Excelsior Coal Co.,		1	1	....	41	61	12	.....	2	12	6	136	1	1	6	14	7	11	2	46	88	224
Totals,		15	55	27	2,491	930	416	69	62	387	1,098	5,550	5	19	139	323	565	121	47	1,151	2,370	7,920

TABLE 3.--Part 2

Names of Operators	County	Average Number of Days Worked in Breaker												
		January	February	March	April	May	June	July	August	September	October	November	December	Totals
Philadelphia and Reading Coal and Iron Co..	Northumberland,	20	15	24	22	17	14	10	13	14	20	22	22	213
Mineral Railroad and Mining Co.,		19	14	18	19	17	13	11	11.	14	20	21	22	199
Lehigh Valley Coal Co.,		19	14	18	22	16	14	8	7	10	14	19	17	178
Greenough Red Ash Coal Co.,		23	16	25	22	21	17	17	16	18	22	22	24	243
Colonial Collieries Co.,		24	22	26	22	20	24	22	25	23	24	16	19	267
Enterprise Coal Co.,		13	23	22	22	18	12	11	11	10	10	7	14	173
Excelsior Coal Co.,		17	14	16	15	11	12	8	12	12	16	16	14	163

TABLE 4.—Fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Colliery	County	Nature and Cause of Accident in Brief
Jan. 11	Thomas Williams,	Welsh,	Miner,	57	M.	1		Locust Gap,		Killed by fall of slate at face of breast. He was barring coal off the rib, which loosened the slate.
11	Stany Simonisky,	Polish,	Miner,	30	M.	1	1	Alaska,		Fatally injured by cars. While riding on the front of a trip of loaded cars the mule began to kick and he jumped off on the high side of the gangway and was caught between car and timber. Died January 13.
23	Alex. Lacovish,	Polish,	Miner,	22	S.			Richards,		Killed by cars. While he was getting out of the gunboat at bottom of slope, the engineer began to hoist and Lacovish fell under. An investigation showed that a piece of slate fell on the wire and rang the bell.
26	William Moser,	American,	Driver,	22	M.	1		Scott,	Northumberland	Killed by cars. While coming in with an empty trip to the bottom of plane a trip of loaded cars came down the plane and ran into him.
Feb. 9	Condy Bridy,	Austrian,	Miner,	25	S.			Richards,		Killed by falling down a breast manway.
11	Dominick Anglone,	Italian,	Miner,	30	M.	1	2	Pennsylvania,		Killed by fall of coal. He was trying to loosen some plank in an old breast and discharged a prop and a fall of top coal came on him.
17	Stany Kensel,	Polish,	Miner,	45	M.	1	5	Locust Gap,		Killed by fall of coal in breast. He was barring down top slate and part of it fell on him.
March 12	Joseph Menkewitz,	Polish,	Miner,	26	M.	1		Alaska,		Killed by a blast in breast. He had shortened the squib and the blast went off before he reached a place of safety.

April	14	Edward Hanks,	American,	Driver,	19	S.			Pennsylvania,	Northumberland	Killed by fall of slate while going down an old abandoned breast to the gangway below.
	22	Frank Warencavitch,	Polish,	Laborer,	19	S.			Scott,		Killed by fall of top coal in a breast. He was working with his father.
May	1	Anthony Washefski,	Polish,	Miner,	45	M.	1	3	Pennsylvania,		Killed by fall of slate while dressing off a shot in breast.
	11	William Allen,	American,	Motorman,	22	S.			Richards,		Killed by cars on gangway. While pushing a truck out in front of the motor, the truck became derailed and he was caught between truck and motor.
June	2	Stany Yackobofski,	Polish,	Miner,	23	S.			Richards,		Fatally burned by an explosion of gas He went up his breast, after a shot, with a naked light on his head and encountered gas, which exploded.
	3	Patrick Purcell,	American,	Miner,	32	S.			Richards,		Killed by explosion of gas. He went up his breast with a naked light on his head and encountered a small body of gas, which exploded.
	4	Adam Gursky,	Polish,	Laborer,	18	S.			Enterprise,		Killed by fall of slate in breast while loading a car.
July	9	Dominick Baluta,	Polish,	Driver,	30	S.			Pennsylvania,		Killed by a kick from a mule on gangway.
Aug.	13	Lot Millard,	English,	Miner,	25	M.	1		Locust Gap,		Killed by fall of slate at face of breast while trying to bar it down.
	18	James Sweitz,	Polish,	Miner,	37	M.	1	6	Richards,		Fatally burned by explosion of gas at face of breast. He struck a match to light a shot, and the gas exploded.
	31	William Thompson,	English,	Miner,	45	M.	1	4	Natalie,		Killed by fall of coal at face of breast. They fired a shot in the face of breast and then went down to the platform to load a car. After loading the car they went back to the face and sat down, when the coal fell.
		John Minich,	German,	Laborer,	25	S.					
Sept.	23	Daniel Galagher,	Irish,	Miner,	38	M.	1	4	Locust Gap,		Killed by fall of coal at face of breast.
Oct.	20	Frank Shicton,	Italian,	Doorboy,	17	S.			Alaska,		Killed by cars on gangway. He neglected to open the door until the loaded trip was near, and then made an effort to open it and was caught by the cars.
	27	John O'Donnell,	American,	Miner,	32	M.	1	3	Sayre,		Killed by falling down manway. He was fixing a chute in which the timbers are slid down to a counter, and his feet slipped and he fell down manway.
Nov.	26	Anthony Norbon,	Polish,	Miner,	35	S.			Scott,		Killed by a piece of coal that glanced off the cage at bottom of shaft and struck him on the head.
Dec.	7	Bartol Flasolti,	Tyrolean,	Miner,	26	M.	1		Pennsylvania,		Killed by fall of slate at face of breast. He was dressing off a shot when it fell on him.

TABLE 4—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Colliery	County	Nature and Cause of Accident in Brief
Dec. 16	Frank Zacula,	Polish,	Laborer,	25	S.			Natalie,		Killed by fall of slate. The miner sent him to look for the driver and while standing at the bottom of the slope an empty car ran down and knocked a set of timber out and the slate fell on him.
17	Michael Popo,	Polish,	Laborer,	20	S.			Alaska,		Fatally scalded by falling into a tank of boiling water. He evidently forgot about this tank, which was used for purifying water for the boilers, and walked into it while returning from the supply store.
23	Tony Malitzo,	Italian,	Laborer,	36	M.	1	1	Locust Spring,	Northumberland	Killed by falling into machinery. While starting a chute that carries rock down to a conveyor in the breaker, he fell against the side of the conveyor and was dragged between it and a prop. Outside.
30	Christopher McGinn,	Irish,	Miner,	57	M.	1		Locust Gap,		Killed by fall of slate at face of breast while dressing off a shot.

TABLE 5.—Non-fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Colliery	County	Nature and Cause of Accident in Brief
Feb. 10	Matthew Smith,	American,	Conveyor tender,	16	S.	Reliance,	Northumberland	Leg broken by falling in a drag line. Outside.
March 12	James Weikle,	American,	Bottom man,	20	S.	Locust Spring,		Knee cap broken. Caught between car and shed at bottom of plane. Outside.
19	Thomas Thompson,	Welsh,	Miner,	50	M.	Greenough,		Leg broken by fall of coal in chute at face.
April 22	Stany Rublueski,	Polish,	Loader,	28	S.	Pennsylvania,		Leg broken by a piece of slate rolling down a chute on his leg.
24	John Willington,	Slavonian,	Laborer,	42	M.	Richards,		Leg broken while unloading timber. Outside.
May 10	Anthony Shilefski,	Polish,	Miner,	46	M.	Reliance,		Left hand blown off while opening a box of dualin caps a spark from his lamp fell into the box and caps exploded.
18	Jonathan Butts,	American,	Fire boss,	51	M.	Richards,		Badly squeezed between car and prop while trying to throw the top door of a wagon in motion.
June 2	John Shamonski,	Polish,	Miner,	23	S.	Richards,		Slightly burned by explosion of gas at face of old breast.
July 22	William Krosnofski,	Polish,	Miner,	35	S.	Locust Gap,		Head injured at face of breast. He thought a blast had missed and went back to the hole, and was shot in the head.
Aug. 14	John Shoppy,	American,	Fire boss,	50	M.	Locust Gap,		Leg broken by falling off the front of trip under the cars on gangway.
17	Enoch Smelter,	American,	Driver,	17	S.	Reliance,		Seriously injured by being squeezed between car and high side on gangway.
Sept. 1	William E. Doyle,	Irish,	Bottom man,	25	M.	Locust Gap,		Leg broken. A piece of coal fell on it from top of car at bottom of slope.
Nov. 18	Alex. Junis,	Lithuanian,	Miner,	29	S.	Locust Gap,		Leg broken by fall of coal in heading.

TABLE 5—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Colliery	County	Nature and Cause of Accident in Brief
Nov. 22	Felix Gethridge, ...	Polish, ...	Miner, ...	41	M.	Richards, ...		Severely injured about body by blast. He fired two holes. One missed and when he went to the face of the breast the other shot went off.
23	Fred Reddinger, ...	American,	Miner, ...	33	M.	Sayre No. 4, ...	Northumberland	Leg broken by fall of slate in chute.
26	Thomas Torkoski, ...	Polish, ...	Miner, ...	40	M.	Richards, ...		Slightly burned by explosion of gas at face of breast. He had blocked his manway with coal and gas accumulated, and when he opened his safety lamp the gas exploded.

MINE FIRE AT LOCUST SPRING COLLIERY

A mine fire was discovered at Locust Spring Colliery on the morning of July 14, 1909, in the East Top Split gangway, North Dip, 3rd lift, in the inside chute of No. 68 breast.

This gangway was driven to its bounds in March, 1904 (Breast No. 74 being the last breast opened) and at the present time the breast pillars and stumps are being robbed out, the robbing being completed to the inside rib of No. 68 breast.

On the morning of July 14, the colliery started operations after an idleness dating from July 9, and previous to the entrance of the men to the East Top Split gangway, the Fire Boss, Nicholas Ditchey, made an examination of all working places and reported everything all right. Breast No. 68 was not accessible beyond the starters' heading, and at that place there was no indication of fire. Detection of the fire was difficult, because this section of the mine is ventilated with a force fan, the outlet being through the breaches on the mountain.

At about 7.30 A. M., the second wagon of coal was being drawn out of the inside chute of No. 68, when the driver and loader discovered red hot coal coming out. They at once notified Inside Foreman James Gordon, who come to the scene to ascertain the facts and directed the men nearby to throw water from the ditch on the fire in the chute, using powder kegs, until he could get more men. He sent word at once to Division Superintendent P. F. Brennan.

Methods Employed in Fighting the Fire

After Mr. Brennan had notified Mining Superintendent Reese Tasker of the fire, he hurried inside to direct the fight against it. In a short time Mr. Tasker arrived and they at once ordered a 2½ inch hose line to be laid from the foot of No. 1 slope to the fire, 5,670 feet distant. An 8-inch x 12 inch Cameron pump was set up at foot of slope and was operated by compressed air from the low pressure air compressor plant used at the colliery for rock work.

The Cameron pump and 2½ inch hose line were installed by 8 o'clock in the evening and by 10 o'clock water was being pumped from a ditch at foot of No. 1 slope through the line to the fire in the chute.

The drawing of coal from the chute and playing of water on the burning material was continued until next day, when the officials directed their attention to the Monkey gangway over No. 68 chute, where the heat was far more intense than in the chute.

By 7 P. M. on the 15th, a 6½-inch x 11-inch Brown gasoline engine, connected with a 4½-inch x 5-inch triplex pump, was installed in the cross-cut tunnel at No. 47 breast. This pump used the ditch water from the East Bottom Split gangway and pumped the water through several hose lines laid to fire in the Monkey gangway.

A 5½-inch x 12½-inch Otto gasoline engine, connected with a 4½-inch x 5-inch triplex pump, was installed on gangway opposite the cross-cut tunnel by 11 A. M. on the 17th, and pumped the ditch water coming out of the Top Split gangway.

Y's were placed on the main lines from each of the three pumps at convenient places, to give additional hose lines. In all there were eight lines for use at any time.

The hose line from the Worthington pump at foot of slope was found, after a day or two in service, to be breaking from water pressure, and was replaced with 3-inch gas pipe to within a short distance of the fire area.

The main hose lines from the two triplex pumps were also replaced by 3-inch gas pipes to guard against delays caused by bursting hose and to give a greater supply of water.

Two small headings were driven from the Monkey gangway to the inside chute of No. 68 breast, and another heading was driven from No. 68 outside to No. 68 inside chute, in each case to get an opening to the fire. There was considerable difficulty attending the driving of these headings on account of the intense heat and the air current being temporarily reversed at times, which pushed the coal gas out on the miners engaged at this work.

Drill holes at various angles were drilled in the coal from the Monkey gangway to the fire zone. Pieces of perforated gas pipe were then inserted into the holes, coupled up to the hose lines and water turned on. On several occasions there were pretty sharp explosions, giving evidence that the water was striking hot coal.

At the outset the fire fighters were divided into 3 shifts of 8 hours each, there being a sufficient number of men on hand to relieve one another. Each shift was in charge of a couple of Division Superintendents and several District Superintendents, while Vice President and General Manager W. J. Richards was constantly on the ground to consult with Mining Superintendent Reese Tasker and direct the work.

From the time of the discovery of fire until the fight was given up, the method employed was to alternately play water on the fire and on the rock and coal drawn from the chute. A great number of times the chute became blocked with very large boulders, which made it necessary to break them up by the use of explosives, sometimes as much as 18 sticks of dynamite being used for a single charge. In one instance, very large boulders blocked the chute at the battery and it was a serious matter to dislodge them.

It was too hazardous a risk to crawl to that point, so 18 sticks of dynamite were securely tied to a long plank, then connected up to battery wires and pushed up the chute as far as possible. The charge was exploded by use of battery and resulted in breaking up sufficient rock to again load from chute.

At other times the work of drawing the breast had to be temporarily stopped while water was being pumped on the fire through the headings and drill holes in Monkey gangway. This water became so hot and generated so much steam by the time it reached the gangway that the men had to retreat for the time being.

At times it would seem that the fire was being gotten under control, but owing to its inaccessibility it was an unknown quantity to what extent it had spread eastward and up the pitch. The only place on the surface where steam could be seen coming out was in the bottom of mine breach over No. 69 breast, No. 68 not being breached. The quantity of steam varied with the temperature outside, and it

was therefore impossible to tell by it whether or not the fire was increasing in extent. During the day and night of July 22 and the morning of July 23, a thermometer was used in Monkey gangway to take the temperature. After the water had been turned onto the fire awhile, the temperature would fall to about 100 degrees, but when the water was turned off a while, it would increase to as much as 140 degrees and make it impossible for the men to stay in the gangway.

On the evening of July 22, Mr. Richards, after a conference with his staff, decided that this plan of fighting the fire should be stopped and preparations be made to build brick dams across the main gangway and the Monkey gangway at breast No. 48, in order to drown out the fire area.

On the morning of July 23 the work of clearing up any loose material inside of proposed brick dams was begun.

The following shows a record of the number of wagons of coal and rock (mixed) loaded from No. 68 breast from July 14 to 23 inclusive.

Shift.	14th.	15th.	16th.	17th.	18th.	19th.	20th.	21st.	22nd.	23rd	Totals.
7 A. M. to 3 P. M.,	36	------	7	3	7	9	10	20	18	3	113
3 P. M. to 11 P. M.,	------	10	10	9	17	7	25	18	18	------	114
11 P. M. to 7 A.M.,	------	13	9	8	18	14	18	20	18	------	118
Totals,	36	23	26	20	42	30	53	58	54	3	345

Preparations for Brick Dams

As previously stated, on the morning of July 23, all loose material inside of proposed stoppings was gathered up and taken to the surface, which was accomplished by noon. Work was then started on air batteries to shut off the air from the fire.

The battery on the Main gangway was built at a point 94 feet east of the center of proposed brick dam, while the one built across Monkey gangway was at a point 110 feet east of the center of the proposed brick dam. While these batteries were being erected, other men were engaged in building a temporary dam across the Main gangway with 8-inch cast iron pipe leading therefrom to a point outside of the dam site, to convey the mine water while the hitches were being made in the ribs for the brick dam.

At midnight of July 23, the work of standing 12-inch x 12-inch square timber was begun on Main gangway.

One set was placed along the outside edge and another along the inside edge of proposed dam, making a space of 10 feet for thickness of brick work. Another set of square timber was erected west of outside set and one east of inside set, at 4-foot centers, and the whole perimeter between the two sets of timber on each side of dam site was planked and wedged. This work was finished at noon on July 24, when the work of excavating in coal was started.

The cutting of coal for hitches was intended to be mostly all pick work in order to have a good solid face for the brick work, but the coal was so strong that a few shots were fired in it to expedite the work. After all the coal had been cut out from top to bottom slate, 1-inch

air drills were used to drill holes in the top and bottom rock from 2 to 3 feet for an additional hitch. Power for these drills was applied from the surface plant through the 3-inch line formerly used for water from foot of slope. The work of mucking the material on Main gangway dam was completed at 10 P. M. July 26, when it was ready for the laying of brick by company masons. The placing of square timber in Monkey gangway was done on similar lines as on the Main gangway, except that 10-inch square timber was used instead of 12-inch as on the Main gangway. The Monkey gangway timber was erected and planked, wedged, etc., by 3 P. M., July 24, when the excavation for the brick dam in the Monkey gangway was started. This work was completed at 7 P. M. on July 27.

There were 75 wagons of coal and 14 wagons of rock loaded from the hitches made in the Main gangway and Monkey gangway.

Building Brick Dams

The first brick laid in the Main gangway was placed in the southeast corner of excavation by Mining Superintendent Reese Tasker at 11 P. M. July 26, and the actual brick work was begun by company masons shortly thereafter. The work was continued without a minute's delay until the dam was erected.

There were 3 shifts of 8 hours each on the job, each shift in charge of a boss mason.

The 8-inch diameter cast iron pipe that was placed across the dam opening to convey mine water was kept in place and imbedded in brick work, and on the outside end of pipe an 8-inch valve was bolted to regulate the flow of water from the dam when it is time to draw it off.

A 20-inch diameter cast iron pipe was imbedded in the brick work as a means of outlet for the men finishing the brick work on the inside and also for the men finishing the Monkey gangway dam. It was also intended for passing material through.

When the brick work reached a point level with the bottom of collars on Main gangway, a piece of 2½-inch gas pipe was imbedded in the brick work, but always with an open end to supply air to the men. It was coupled up with the compressed air line from foot of slope and furnished good ventilation until the brick work was finished to within 18 inches of the inside face, when the end of the pipe was closed with an iron plug screwed into a ferrule on pipe.

The remaining brick were laid up without much difficulty, as the air coming through the 20-inch pipe was sufficient to complete the work.

The Main gangway dam was completed at 4 P. M., July 29, making 65 consecutive hours consumed in laying the brick.

The brick dam in Monkey gangway was started at 11 P. M., July 27, and completed at 2 P. M., July 30, making 63 consecutive hours consumed in laying the brick.

A 2½-inch pipe was also imbedded in the brick work of this dam and coupled up to the air compressor line to get air to the men. This pipe was closed with an iron plug screwed into a ferrule on end of pipe at a point 1 foot from the inside face of dam. The last brick in this dam was put in place by District Superintendent James P. McDonald.

At noon of July 31, the blank flange was bolted to the outside of the 20-inch pipe through the dam on gangway and the 8-inch valve was closed. At 2 P. M., same date, the 14-inch x 48-inch Jeanesville pump located at washery started to pump water through the temporary 10-inch and 12-inch pipe line into a breach over breast 43, off Top Split counter.

By 2.30 P. M., August 3, the water had reached a height of 162 feet, with 61 pounds pressure, when Inside Foreman James Gordon reported that there was a lot of water coming out of No. 11 chute in the East Bottom Split gangway, 3rd lift.

Reason for Brick Dam Tunnel

As No. 11 breast was never opened off of the chute, the water evidently came through the measures into No. 13 breast, which is about opposite No. 59 breast in the Top Split gangway, 3rd lift. There is an interval of 30 feet between the Top Split and Bottom Split at this point, this interval including the Middle Split of Mammoth vein.

Vice President and General Manager W. J. Richards and his staff visited the colliery August 4, when Division Superintendent Brennan informed the party that the gauge on dam at 7 A. M. showed 74 pounds pressure and 172 feet head, and that it had not increased any up to 8.30 A. M.; also that the flow of water in the ditch through the cross-cut tunnel from the Bottom Split vein had increased over one inch and that the water was coming down Nos. 8, 9 and 10 breasts off the Bottom split and was quite warm.

Mr. Richards and party then went inside to the dam and into the Bottom Split gangway, and it was found, by measuring the flow of water in the ditch, that it amounted to 900 to 1,000 gallons per minute. Mr. Richards then decided to have a brick dam, 10 feet thick, built in the tunnel across the basin at a point 18 feet south of Bottom Slate or Four Foot vein, North dip.

Building Brick Dam in Tunnel

The company rock men started to make hitches in the tunnel at 4 P. M., August 4, 1909.

The progress of cutting hitches was impeded somewhat on account of the tough piece of conglomorate and sandstone rock encountered. The hitches in rock were completed at 4.30 P. M., August 7, 1909, when the company masons started to lay the brick, which work was continued without interruption until its completion at 11 A. M., August 9, consuming 43 hours. Division Superintendent P. J. Brennan put the last brick in place in this dam.

The thickness of the brick dam is 11 feet and 3 inches, the extra width being on the inside end on account of imbedding the flange of the 14-inch pipe in brick work.

There is a 14-inch diameter cast iron pipe through the dam and on the front end there was bolted to it an 8-inch to 16-inch matching piece drilled to suit a 14-inch pipe. On the end of matching piece an 8-inch valve was bolted to regulate the flow of water from dam when drawing it off.

A 20-inch diameter pipe was placed in the dam as a means of exit for men after completing the brick work on the inside.

The 8-inch valve was closed at 8.30 A. M., August 10, and the water was allowed to rise back of dam until it reached the bottom of the 20-inch pipe, when the blank flange was bolted onto it. This flange was put on the pipe at 2.30 P. M., August 10.

There were 31 wagons of rock loaded from the hitches made for the Tunnel dam.

The following material was used in the construction of the brick dams: Main gangway dam at Breast No. 48, East Top split, North Dip, 3rd Lift, 148 barrels Portland cement, 62 tons river sand, 55,805 hard red brick.

Brick work started 11 P. M., July 26, 1909, and completed at 4 P. M., July 29, 1909, 65 hours to lay brick.

Monkey dam vertically above Gangway dam—136½barrels Portland cement, 58 tons river sand, 51,513 hard red brick.

Brick work started at 11 P. M., July 27, 1909, and completed at 2 P. M., July 30, 1909, 63 hours to lay brick.

Proportion: 3 parts cement to 5 parts sand; 377 brick to one barrel cement.

Dam in South End of Tunnel across basin, 3rd lift—114¼ barrels Portland cement, 40 tons river sand, 48,425 hard red brick.

Brick work started at 4.30 P. M., August 7, 1909, and completed at 11 P. M., August 9, 1909; 43 hours to lay brick.

Proportion: 3 parts cement to 5 parts sand; 424 brick to one barrel cement.

CONDITION OF COLLIERIES

PHILADELPHIA AND READING COAL AND IRON COMPANY

Locust Spring Colliery—Locust Spring Shaft.—Ventilation and drainage good; road beds and general condition as to safety, good.

Locust Spring No. 1 Slope.—Ventilation, drainage and road beds in good condition.

Locust Spring, West Slope.—Ventilation, drainage and general condition, good.

Locust Gap, East.—Ventilation, drainage, road beds and condition as to safety, good.

Locust Gap, West.—Ventilation, drainage and road beds in fairly good condition.

Locust Gap—Buck Mountain Slope.—Ventilation good; drainage and road beds in good condition.

Alaska.—Ventilation fairly good; drainage, road beds and general condition as to safety, good.

Reliance.—Ventilation, drainage, road beds and general condition, good.

MINERAL RAILROAD AND MINING COMPANY

Pennsylvania Colliery—Pennsylvania No. 1 Slope.—Ventilation, drainage and general condition as to safety, good.

Pennsylvania No. 5 Slope.—Ventilation, drainage and general condition, good.

Richards Colliery—Richards.—Ventilation, drainage and road beds show a big improvement and will be up to the required standard in a short time.

Richards No. 4.—Ventilation and drainage good; road beds in fair condition.

Richards No. 5.—Ventilation good, drainage fairly good; roads in fair condition.

Scott Colliery.—Ventilation good; drainage fair; road beds in fairly good condition.

LEHIGH VALLEY COAL COMPANY

Sayre Colliery—Sayre Shaft.—Ventilation, drainage and road beds in good condition; general condition as to safety, good.

Sioux No. 3.—Ventilation good; road beds fair; general condition as to safety good.

Sioux No. 1.—Ventilation and drainage fair; condition of road beds could be improved.

GREENOUGH RED ASH COAL COMPANY

Greenough Colliery.—General condition good.

ENTERPRISE COAL COMPANY

Enterprise Colliery—Enterprise Shaft.—Ventilation fair; drainage and road beds in poor condition.

Enterprise No. 3 Slope.—Ventilation fair; drainage and road beds in fairly good condition.

COLONIAL COLLIERIES COMPANY

Natalie Colliery—Natalie No. 1.—Ventilation, drainage and road beds in fair condition.

Natalie No. 2.—Ventilation fair; drainage and road beds in poor condition.

Natalie No. 3.—Ventilation, drainage and road beds in fairly good condition.

EXCELSIOR COAL COMPANY

Excelsior Colliery.—General condition, fair.

MINE FOREMEN'S EXAMINATIONS

The examination of applicants for certificates of qualification as Mine Foremen and Assistant Mine Foremen was held at Pottsville, April 21 and 22.

The following persons passed a satisfactory examination and were granted certificates:

Mine Foremen

Patrick Doyle, Martin Burke, William Ruffing, Peter N. Brecker, Edward I. Weimer, Peter A. Bonawitz, Richard J. Uren and Austin Singley.

Assistant Mine Foremen

John McGinley and Martin Purcell.

SIXTEENTH DISTRICT

NORTHUMBERLAND COUNTY

Shamokin, Pa., February 21, 1910.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor of transmitting herewith my annual report as Inspector of Mines of the Sixteenth Anthracite District, for the year ending December 31, 1909.

Respectfully submitted,

M. McLAUGHLIN,
Inspector.

SUMMARY OF STATISTICS

Number of collieries	11
Number of mines,	36
Number of mines in operation,	36
Number of tons of coal shipped to market,	2,175,858
Number of tons used at mines for steam and heat,	281,926
Number of tons sold to local trade and used by employes,	65,494
Number of tons produced,	2,523,278
Number of tons produced by compressed air machines,	.....
Number of tons produced by electrical machines,	.....
Number of persons employed inside of mines,	4,811
Number of persons employed outside,	2,147
Number of fatal accidents inside of mines,	19
Number of fatal accidents outside,	4
Number of non-fatal accidents inside of mines,	31
Number of non-fatal accidents outside,	4
Number of tons of coal produced per fatal accident inside,	132,804
Number of persons employed per fatal accident inside,	253
Number of persons employed per fatal accident outside,	537
Number of persons employed per non-fatal accident inside,	155
Number of persons employed per non-fatal accident outside,	537
Number of wives made widows,	13
Number of children made orphans,	41
Number of steam locomotives used inside of mines,	.....
Number of steam locomotives used outside,	18
Number of compressed air locomotives used inside,	.....
Number of compressed air locomotives used outside,	.....
Number of electric motors used inside,	5
Number of electric motors used outside,	.....
Number of fans in use,	38
Number of furnaces in use,	.....
Number of gaseous mines in operation,	17
Number of non-gaseous mines in operation,	19
Number of new mines opened,	.....
Number of old mines abandoned,	2

TABLE A

PRODUCTION OF COAL

Names of Operators	Tons
Philadelphia and Reading Coal and Iron Company,	1,209,012
Mineral Railroad and Mining Company,	808,278
Excelsior Coal Company,	161,080
Shipman Koal Company,	156,967
Buck Ridge Coal Company,	127,743
Trevorton Colliery Company,	60,198
Total,	2,523,278

Production by Counties

Northumberland,	2,523,278

TABLE B.—Fatal and non-fatal accidents inside and outside of mines; number of tons of coal produced per accident; number of persons employed; number employed per accident

Names of Operators	Fatal Accidents			Non-Fatal Accidents			Tons of coal produced per fatal accident inside	Tons of coal produced per non-fatal accident inside	Number of employes inside	Number of employes outside	Total number of employes	Number of employes inside per fatal accident	Number of employes outside per fatal accident	Number of employes inside per non-fatal accident	Number of employes outside per non-fatal accident
	Inside	Outside	Total	Inside	Outside	Total									
Philadelphia and Reading Coal and Iron Co.,	7	2	9	16	2	18	172,716	75,563	2,248	916	3,164	321	458	141	458
Mineral Railroad and Mining Co.,	10	1	11	10	2	12	80,528	80,528	1,576	807	2,383	158	807	158	404
Excelsior Coal Co.,	.....	1	1	2	.....	2	.....	80,540	371	73	444	.....	73	186	.....
Shipman Koal Co.,	2	.....	2	2	.....	2	78,484	78,484	268	159	427	134	.....	134	.....
Buck Ridge Coal Co.,	.....	.....	.....	1	.....	1	.....	127,743	200	70	270	.....	.....	200	.....
Miscellaneous Companies,	.....	.....	.....	.....	.....	.....	.....	.....	148	122	270	.....	.....	.....	.....
Totals and averages for district,	19	4	23	31	4	35	132,804	81,396	4,811	2,147	6,958	253	537	155	537

TABLE C.—Classification of Fatal Accidents Inside and Outside of Mines

	Months													
	January	February	March	April	May	June	July	August	September	October	November	December	Totals	Percentages
Causes of Accidents Inside														
Falls of coal,	....	1	....	....	....	....	1	....	....	1	1	....	4	21.05
Falls of slate,	....	....	....	1	....	1	....	....	1	....	3	1	7	36.84
Mine cars,	....	....	....	....	1	....	1	....	....	....	....	....	2	10.53
Explosions of powder and dynamite,	....	....	....	....	1	....	....	....	....	1	....	....	2	10.53
Blasts, premature and otherwise,	1	....	....	....	....	....	....	....	....	....	....	....	1	5.26
Falling into slopes, etc.,	....	1	....	1	....	....	....	....	....	....	....	....	2	10.52
Crushed at batteries,	1	....	....	....	....	....	....	....	....	....	....	....	1	5.26
Totals,	2	2	....	2	2	1	2	....	1	2	4	1	19	100.00
Causes of Accidents Outside														
Cars,	....	....	....	....	....	....	....	....	....	1	....	....	1	25.00
Machinery,	....	....	1	....	....	....	....	....	....	1	....	....	2	50.00
Miscellaneous,	....	....	....	....	....	1	....	....	....	....	....	....	1	25.00
Totals,	....	....	1	....	....	1	....	....	....	2	....	....	4	100.00
Grand totals inside and outside,	2	2	1	2	2	2	2	....	1	4	4	1	23	.....

TABLE D.—Classification of Non-Fatal Accidents Inside and Outside of Mines

	Months													
	January	February	March	April	May	June	July	August	September	October	November	December	Totals	Percentages
Causes of Accidents Inside														
Falls of coal,	....	1	....	1	....	1	1	....	1	....	....	2	7	22.58
Falls of slate,	2	....	....	....	3	1	....	....	1	1	....	1	9	29.03
Falls of roof,	....	....	1	....	....	....	....	....	....	....	....	....	1	3.23
Mine cars,	1	....	1	....	....	....	....	....	1	....	1	....	4	12.90
Explosions of gas,	....	....	2	....	....	....	....	....	....	....	....	....	2	6.45
Explosions of powder and dynamite,	2	....	....	....	....	....	1	....	....	....	....	....	3	9.68
Blasts, premature and otherwise,	1	....	....	1	....	....	....	....	1	....	....	....	3	9.68
Miscellaneous,	....	....	....	....	....	1	....	....	....	....	....	1	2	6.45
Totals,	6	1	4	2	3	3	2	....	4	1	1	4	31	100.00
Causes of Accidents Outside														
Cars,	....	....	....	....	....	1	....	....	....	....	....	1	2	50.00
Miscellaneous,	....	....	....	....	....	....	....	....	....	1	....	1	2	50.00
Totals,	....	....	....	....	....	1	....	....	....	1	....	2	4	100.00
Grand totals inside and outside,	6	1	4	2	3	4	2	....	4	2	1	6	35	.....

TABLE E.—Occupations of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Inside													
Miners,	2	2	....	2	1	1	1	....	1	2	3	1	16
Drivers and runners,	....	....	....	....	1	....	1	....	....	....	1	....	3
Totals,	2	2	....	2	2	1	2	....	1	2	4	1	19
Outside													
Slatepickers (boys),	....	....	1	....	....	....	....	....	....	....	....	....	1
Machinists,	....	....	....	....	....	....	....	....	....	1	....	....	1
Watchmen,	....	....	....	....	....	1	....	....	....	....	....	....	1
Oilers,	....	....	....	....	....	....	....	....	....	1	....	....	1
Totals,	....	....	1	....	....	1	....	....	....	2	....	....	4
Grand totals inside and outside,	2	2	1	2	2	2	2	....	1	4	4	1	23

TABLE F.—Occupations of Persons Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Inside													
Miners,	4	1	2	1	3	2	1	....	3	1	....	3	21
Miners' laborers,	1	....	1	....	....	....	1	....	....	....	....	1	4
Drivers and runners,	1	....	1	....	....	1	....	....	1	....	1	....	5
Starters,	....	....	....	1	....	....	....	....	....	....	....	....	1
Totals,	6	1	4	2	3	3	2	....	4	1	1	4	31
Outside													
Drivers,	....	....	....	....	....	....	....	....	....	1	....	....	1
Laborers,	....	....	....	....	....	1	....	....	....	....	....	2	3
Totals,	....	....	....	....	....	1	....	....	....	1	....	2	4
Grand totals inside and outside,	6	1	4	2	3	4	2	....	4	2	1	6	35

TABLE G.—Nationality of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
American,	2		1				2			1	3		9
German,						1							1
Polish,		2		2	1	1			1	2	1	1	11
Italian,					1								1
Austrian,										1			1
Totals,	2	2	1	2	2	2	2		1	4	4	1	23

TABLE H.—Nationality of Persons Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
American,	3		1		1	1	2		1	1		4	14
Welsh,	1												1
Irish,				1		1			1				3
German,											1		1
Polish,	1	1	2	1	1	2			1	1			10
Slavonian,			1										1
Lithuanian,					1								1
Austrian,	1												1
Russian,									1			1	2
Greek,												1	1
Totals,	6	1	4	2	3	4	2		4	2	1	6	35

TABLE I.—Operators and mines, kind of openings, type and size of fans, size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents and number of persons employed inside

Names of Operators and Mines	Kind of opening	Gaseous or non-gaseous	Method of ventilation	Diameter of fan in feet and inches	Width of blades in feet and inches	Depth of blades in feet and inches	Number of revolutions per minute	Water gauge developed—in inches	Name of fan	Power used	Number of splits of air currents	Number of cubic feet of air per minute entering the mine at inlet	Total quantity of air per minute circulating in all the splits in cubic feet	Number of cubic feet per minute passing out at outlet	Number of persons employed inside
Philadelphia and Reading Coal and Iron Co.															
Bear Valley Colliery:															
Bear Valley No. 1,	Shaft,	Gaseous,	Fan,	12	4.	3.6	40	.5	Guibal,	Steam,	1	14,000	13,000	14,500	450
Bear Valley No. 2,	Shaft,	Gaseous,	Fan,	18	5.9	4.9	115	2.1			6	70,000	61,000	73,500	
Bear Valley No. 3,	Drift,	Non-gas.	Fan,	15	3.11	5.	90	.6			2	40,000	31,000	41,500	
Big Mountain Colliery:															
Big Mountain No. 1,	Slope,	Gaseous,	2 Fans,	18	6	5.5	40	1.2	Guibal,	Steam,	3	24,520	23,000	25,000	250
	Slope,	Gaseous,	Fan,	12	4	3.6	120	1.6			4	24,000			
Big Mountain No. 2,	Slope,	Gaseous,	Fan,	18	6	5.5	75	.8			3	27,000	22,000	29,500	
Burnside Colliery:															
Burnside No. 1,	Shaft,	Gaseous,	2 Fans,	15	4.	5.	85	1.1	Guibal,	Steam,	6	39,750	31,300	41,000	400
Burnside No. 2,	Shaft,	Gaseous,	Fan,	15	4.	5.	90	1.1			3	28,475	25,000	30,500	
Burnside No. 3,	Drift,	Non-gas.	Fan,	15	4.2	5.6	40	1.			4	29,825	24,500	31,400	
Henry Clay Colliery:															
Henry Clay No. 1,	Shaft,	Gaseous,	2 Fans,	21	7	6.3	68	1.4	Guibal,	Steam,	3	30,000	25,000	31,000	312
Henry Clay No. 2,	Shaft,	Gaseous,	Fan,	15	4	5.	120	1.2			8	49,500	47,500	58,000	
North Franklin Colliery:															
North Franklin No. 1,	Drift,	Non-gas.	Fan,	18	6	6	70	.7	Guibal,	Steam,	7	45,600	38,000	48,000	430
North Franklin No. 2,	Slope,	Non-gas.	Fan,	18	5	5	86	2.1			7	48,000	36,000	50,700	
North Franklin No. 3,	Slope,	Gaseous,	Fan,	15	5	3.6	50	.1			2	16,000	15,000	17,000	

Stirling Colliery:																
Stirling No. 1,	Slope,	---	Gaseous,	3 Fans, --	18	6	5.4	80	1.3	Guibal, --	Steam, ---	9	41,500	28,200	43,000	250
Stirling No. 2,	Slope,	---	Gaseous,	Fan, -----	21	7.2	6.	60	1.3			8	46,500	32,400	49,000	
Stirling No. 3,	Slope,	---	Gaseous,	Fan, -----	15	4.6	4.3	85	1.3			6	36,000	25,000	38,000	
Mineral Railroad and Mining Co.																
Cameron Colliery:																
Cameron No. 1,	Slope,	---	Gaseous,	Fan, -----	18	7.	5.3	100	2.8	Guibal, --	Steam, ---	6	64,500	44,500	67,000	670
Cameron No. 2,	Slope,	---	Gaseous,	Fan, -----	16	6.	5.2	96	2.4			5	55,500	45,000	57,300	
Cameron No. 3,	Dritt,	---	Non-gas.	Fan, -----	14	4.	4.	120	1.4			6	65,000	53,000	68,000	
Cameron No. 4,	Drift,	---	Non-gas.	Fan, -----	16	6.	5.2	100	2.			5	54,000	43,000	57,000	
Cameron No. 5,	Drift,	---	Non-gas.	Fan, -----	6	3.3	1.5	200	1.5	Sturdevant,	Electricity, -	4	7,500	6,000	8,500	
Cameron No. 6,	Drift,	---	Non-gas.	Natural, -								1	10,000	8,500	10,500	
Hickory Ridge Colliery:																
Hickory Ridge No. 1,	Drift,	---	Non-gas.	Fan, -----	12	4.	3.1	90	1.2			1	30,000	25,000	31,500	480
Hickory Ridge No. 2,	Drift and Slope,	---	Non-gas. Gaseous,	2 Fans, --	15 18	4.1 7.	4.8 5.6	65 70	1. .9	Vulcan, --	Steam, --	8	105,000	90,000	109,000	
Hickory Ridge No. 3,	Slope,	---	Non-gas.	Natural, -								1	10,000	8,000	10,500	
Hickory Swamp Colliery:																
Hickory Swamp No. 1,	Slope,	---	Gaseous,	2 Fans, --	6 16	3.3 5.5	1.5 4.5	60 70	.6 1.2	Sturdevant, -- Mullen, --	Steam, ----	8	60,000	49,000	63,000	180
Luke Fidler Colliery:																
Luke Fidler No. 2,	Shaft,	---	Gaseous,	Fan, -----	18	7.	5.2	106	2.4	Guibal, --	Steam, ---	7	82,000	70,000	85,000	400
Luke Fidler No. 1,	Shaft,	---	Gaseous,	Fan, -----	18	5.	5.	84	1.6			7	75,000	62,000	77,500	
				Fan, -----	16	6.	5.2	60	2.			2	40,000	31,000	42,000	
Excelsior Coal Co.																
Corbin Colliery:																
Corbin No. 1,	Drift,	---	Non-gas.	Fan, -----	10	3.	3.6	70	1.1	Beadle, --	Steam, ---	2	20,000	16,000	21,500	230
	Drift,	---	Non-gas.													
Corbin No. 2,	Drift,	---	Non-gas.	Fan, -----	10	3.	3.6	60	1.5			2	16,000	12,000	16,700	
	Slope,	---	Non-gas.													
Corbin No. 3,	Slope,	---	Non-gas.	Fan, -----	16	5.	5.	70	1.5			2	52,000	41,000	54,000	
Corbin No. 4,	Slope,	---	Gaseous,	Fan, -----	14	5.	5.	60	1.3			2	44,000	30,000	45,900	
Shipman Koal Co.																
Colbert Colliery:																
Colbert No. 1,	Shaft,	---	Gaseous,	Fan, -----	16	5	4	90	.7	Guibal, --	Steam, ---	6	55,800	33,700	57,900	145
Colbert No. 2,	Drift,	---	Non-gas.	Natural, -								1	6,000	4,000	7,000	4
Colbert No. 3,	Drift,	---	Non-gas.	Natural, -								4	17,000	16,100	18,000	79
Buck Ridge Coal Co.																
Buck Ridge No. 2 Colliery:																
Buck Ridge No. 1,	Slope,	--	Gaseous,	2 Fans, --	14	4.6	4.6	90	1.	Pollock, -	Steam, ---	5	30,000	26,000	31,500	180
Buck Ridge No. 2,	Slope,	---	Gaseous,	Fan, -----	12	3.6	3.6	90	.8	Guibal, --		6	27,000	24,000	27,900	

TABLE I—Continued

Names of Operators and Mines	Kind of opening	Gaseous or non-gaseous	Method of ventilation	Diameter of fan in feet and inches	Width of blades in feet and inches	Depth of blades in feet and inches	Number of revolutions per minute	Water gauge developed—in inches	Name of fan	Power used	Number of splits of air currents	Number of cubic feet of air per minute entering the mine at inlet	Total quantity of air per minute circulating in all the splits in cubic feet	Number of cubic feet per minute passing out at outlet	Number of persons employed inside
Trevorton Colliery Co.															[illegible] 74 [illegible] 2
Katherine Colliery:															
Katherine No. 1, ----------	Drift.	Non-gas.	Fan, -----	7	3.	2.6	325	.5	Stine, ---	Steam, ----	9	28,000	26,000	29,000	
*Katherine No. 2, ----------															
*Katherine No. 3, ----------															

*Idle.

TABLE 1.—Operators, location of collieries, railroads, etc.

Names of Operators and Collieries	County	Name of General Superintendent	Post Office	Name of Superintendent	Post Office	Railroad to Mine
Philadelphia and Reading Coal and Iron Co.						
Bear Valley,	Northumberland,	W. J. Richards,	Pottsville,	Reese Tasker, Mining Supt.	Pottsville,	P. and R.
				P. F. Brennan, Division Supt.	Shamokin,	
Big Mountain,				John C. Brown, Inside District Supt.	Shamokin,	
Burnside,						
Henry Clay,				J. P. Knapp, Outside District Supt.	Shamokin,	
North Franklin,						
Stirling,						
Mineral Railroad and Mining Co.						
Cameron,	Northumberland,	Robert A. Quin,	Wilkes-Barre,	W. A. Reinhardt,	Shamokin,	Pennsylvania
Hickory Ridge,						
Hickory Swamp,						
Hickory Swamp Washery,						
Luke Fidler,						
Excelsior Coal Co.						
Corbin,	Northumberland.	Andrew Robertson,	Pottsville,	George W. Robertson,	Shamokin,	P. and R.
Shipman Koal Co.						
Colbert,	Northumberland.	J. M. Stauffer,	Hazleton,	Joseph J. Evans,	Shamokin,	Pennsylvania
Buck Ridge Coal Co.						
Buck Ridge No. 2,	Northumberland.			D. H. McGee,	Shamokin,	Penna. and P. and R.
Trevorton Colliery Co.						
Katherine,	Northumberland.	J. P. Burton,	Cleveland, O.,	L. I. Van Epps,	Trevorton,	P. and R.

TABLE 2.—Number of tons of coal mined, number of days worked, number of persons employed, number killed and injured, quantity of powder, dynamite and so-called safety explosives used, etc.

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Explosives: Number of pounds of powder used	Explosives: Number of pounds of dynamite used	Explosives: Number of pounds of so-called safety explosives used	Number of horses and mules
Philadelphia and Reading Coal and Iron Co.													
North Franklin,	Northumberland,	255,681	28,293	5,943	289,917	214	639	3	5	144,525	44,803	.....	55
Bear Valley,		184,022	16,964	520	201,506	214	674	2	2	157,050	40,200	.....	74
Burnside,		306,065	48,020	5,533	359,618	216	712	....	3	179,075	25,821	200	122
Stirling,							280	....	5	71,800	8,855	.....	
Henry Clay,		295,432	45,945	16,594	357,971	231	507	3	3	94,300	10,773	.....	94
Big Mountain,							343	1	....	81,225	17,841	.....	
Totals,		1,041,200	139,222	28,590	1,209,012	.....	3,164	9	18	727,975	148,293	200	345
Mineral Railroad and Mining Co.													
Cameron,	Northumberland,	282,836	35,378	21,165	339,379	220	1,044	9	2	152,175	24,960	.....	139
Luke Fidler,		126,897	29,402	12,451	168,750	193	508	....	2	79,450	9,942	.....	70
Hickory Ridge,		223,914	27,110	974	251,998	203	582	1	3	103,100	24,568	.....	59
Hickory Swamp,							222	1	5	32,825	4,515	.....	30
Totals,		633,647	91,890	34,590	760,127	.....	2,356	11	12	367,550	63,985	.....	298
Hickory Swamp Washery,	Northumberland,	43,861	4,290	.....	48,151	145	27	.....	.....	.....	.....	.....	.....
Totals,		677,508	96,180	34,590	808,278	.....	2,383	11	12	367,550	63,985	.....	298

Excelsior Coal Co.													
Corbin,	Northumberland,	141,380	19,700	.....	161,080	211	444	1	2	161,625	6,000	.....	33
Shipman Koal Co.													
Colbert,	Northumberland,	140,471	15,620	876	156,967	238	427	2	2	87,500	14,900	.....	37
Buck Ridge Coal Co.													
Buck Ridge No. 2,	Northumberland,	118,299	8,804	640	127,743	284	270	....	1	75,850	15,900	.....	21
Trevorton Colliery Co.													
Katherine,	Northumberland,	57,000	2,400	798	60,198	157	270	....	....	1,135	10,000	.....	19
Grand totals,		2,175,858	281,926	65,494	2,523,278	.....	6,958	23	35	1,421,635	259,078	200	753

TABLE 2.—Part 2.

Names of Operators	County	Number of Boilers					Locomotives			Number of steam engines of all classes	Total horse power	Number of pumps delivering water to surface	Capacity in gallons per minute	Quantity delivered to surface per minute—gallons	Number of electric dynamos	Number of air compressors
		Cylindrical	Horse power	Tubular	Horse power	Total horse power	Steam	Air	Electric							
Philadelphia and Reading Coal and Iron Co.,	Northumberland,			62	7,750	7,750	5		3	74	13,434	24	19,760	6,681	2	5
Mineral Railroad and Mining Co.,				54	7,320	7,320	9		2	73	8,811	12	16,652	3,905	2	7
Excelsior Coal Co.,		16	512	2	150	662	2			8	240	2	468	310		
Shipman Koal Co.,				9	1,050	1,050				20	1,078	3	1,648	824		1
Buck Ridge Coal Co.,				4	600	600	2			14	460	2	1,380	550		
Trevorton Colliery Co.,				2	600	600				1	270					1
Totals,		16	512	133	17,470	17,982	18		5	193	24,293	43	39,908	12,270	4	14

TABLE 3.—Number of each class of employes inside and outside of mines

Names of Operators	County	Inside											Outside									Grand total inside and outside
		Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Doorboys and helpers	Pumpmen	Company men	All other employes	Total inside	Superintendents	Foremen	Blacksmiths and carpenters	Engineers and firemen	Slate pickers (boys)	Slate pickers (men)	Bookkeepers and clerks	All other employes	Total outside	
Philadelphia and Reading Coal and Iron Co.,	Northumberland,	7	29	....	940	421	136	29	11	262	413	2,248	....	8	36	110	134	44	20	564	916	3,164
Mineral Railroad and Mining Co.,		3	12	28	664	246	117	24	16	54	412	1,576	..	4	48	102	254	22	24	353	807	2,383
Excelsior Coal Co.,		1	3	2	197	71	31	.....	1	57	8	371	1	1	5	18	8	17	.....	23	73	444
Shipman Koal Co.,		2	....	3	128	63	26	.....	3	19	24	268	1	1	12	19	45	7	2	72	159	427
Buck Ridge Coal Co.,		1	....	3	98	30	11	2	2	53	.....	200	1	1	5	10	7	.....	1	45	70	270
Trevorton Colliery Co.,		1	....	3	77	15	8	1	.....	2	41	148	1	2	6	9	7	6	1	90	122	270
Totals,		15	44	39	2,104	846	329	56	33	447	898	4,811	4	17	112	268	455	96	48	1,147	2,147	6,958

TABLE 3.—Part 2

Names of Operators	County	Average Number of Days Worked in Breaker												
		January	February	March	April	May	June	July	August	September	October	November	December	Total
Philadelphia and Reading Coal and Iron Co.,	Northumberland,	20	15	25	22	17	14	11	13	15	21	23	23	219
Mineral Railroad and Mining Co.,		21	13	19	21	17	14	11	12	15	21	19	22	205
Excelsior Coal Co.,		20	15	22	22	17	14	10	13	14	20	23	21	211
Shipman Koal Co.,		23	20	26	23	20	16	19	14	19	21	17	20	238
Buck Ridge Coal Co.,		21	23	25	22	22	24	24	25	25	24	25	25	285
Trevorton Colliery Co.,					2	20	18	9	19	22	20	23	24	157

TABLE 4.—Fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Colliery	County	Nature and Cause of Accident in Brief
Jan. 27	Harry Williard,	American,	Miner,	39	M.	1	3	Cameron,	Northumberland,	Killed by premature blast.
28	Allen Berger,	American,	Miner,	24	M.	1	2	North Franklin,		Killed by rush of coal and slate at battery.
Feb. 23	Stani Coshinskie,	Polish,	Miner,	47	M.	1	5	Henry Clay,		Killed by falling down manway.
	Michael Bocavage,	Polish,	Miner,	45	M.	1	3	Cameron,		Killed by fall of coal at face of air course.
March 31	Charles Neidinger,	American,	Slatepicker,	16	S.			Cameron,		Fatally injured by machinery. Died in State Hospital the same day. Outside.
April 14	Ant. Brozuskie,	Polish,	Miner,	24	M.	1		Cameron,		Leg almost cut off by fall of slate while robbing pillars. Died in State Hospital April 15.
20	Clement Yuetas,	Polish,	Miner,	25	S.			Big Mountain,		Fatally injured. He was overcome by powder smoke in the downcast and fell down the manway.
May 12	Charles Zangavish,	Italian,	Driver,	22	S.			Colbert,		Fatally injured. Squeezed between mine cars and timber on high side of gangway.
25	John Budcofskie,	Polish,	Miner,	40	M.	1	4	North Franklin,		Killed by an explosion of powder caused by a spark from his lamp.
June 26	John Blowitz,	German,	Night Watchman,	54	M.	1	1	Henry Clay,		Fatally injured. He bumped his head against a water pipe in the breaker. Died September 10. Outside.
29	John Sosnoskie,	Polish,	Miner,	27	S.			Colbert,		Killed by fall of slate at face of breast.
July 1	Wesley Good,	American,	Driver,	24	S.			Cameron,		Killed by mine cars on gangway.
30	Ray Beacham,	American,	Miner,	36	M.	1	5	Cameron,		Killed by fall of coal while robbing pillars.
Sept. 3	Felix Cominskie,	Polish,	Miner,	40	M.	1	6	Hickory Ridge,		Leg fractured by fall of slate at face of work. Died in State Hospital September 4.

TABLE 4—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Colliery	County	Nature and Cause of Accident in Brief
Oct. 12	Alex. Stalarskie,	Polish,	Oiler,	17	S.			Corbin,	Northumberland,	Leg squeezed between mine cars at bottom of coal plane. Died in State Hospital October 14. Outside.
21	Oliver Sheetz,	American,	Machinist,	45	M.	1	4	Bear Valley,		Killed by belt wheel in engine room of blacksmith shop while looking after the machinery around the colliery. Outside.
23	Stani Globan,	Polish,	Miner,	33	S.			Cameron,		Fatally burned by powder, caused by an open lamp. Died in State Hospital October 30.
25	Paul Klinger,	Austrian,	Miner,	33	S.			Cameron,		Leg fractured and head lacerated by fall of coal while timbering gangway. Died in State Hospital November 1.
Nov. 3	Joseph Waugh,	American,	Driver,	19	S.			Hickory Swamp,		Killed by fall of slate five hundred feet back from face of gangway.
5	George Kreisher,	American,	Miner,	42	M.	1	5	Cameron,		Killed by fall of slate at face of work.
15	John Rodgers, Jr.,	American,	Miner,	30	M.	1	1	North Franklin,		Killed by fall of top coal while robbing pillars.
26	Anthony Drumbroskie,	Polish,	Miner,	29	S.			Henry Clay,		Fatally injured by fall of slate while robbing pillars. Died in State Hospital November 27.
Dec. 3	Sol. Soster,	Polish,	Miner,	30	M.	1	2	Bear Valley,		Killed by fall of slate at face of breast.

TABLE 5.—Non-fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Colliery	County	Nature and Cause of Accident in Brief
Jan. 5	William Culton,	American,	Miner,	45	M.	Bear Valley,	Northumberland,	Face and hands burned by powder. A spark from the lamp flew into the powder while he was preparing a charge.
12	T. Criesloe,	Polish,	Miner,	38	M.	Hickory Swamp,		Right hand blown off by a charge of dynamite. The dynamite came in contact with his light while he was going up the chute.
19	David Beynon,	Welsh,	Laborer,	60	S.	Henry Clay,		Leg fractured and knee joint dislocated by fall of slate on low side of gangway while digging a ditch.
22	William L. Neidig,	American,	Miner,	56	M.	Cameron,		Hand blown off and head and face lacerated by premature blast.
25	George Lees,	American,	Miner,	27	S.	Corbin,		Leg fractured by fall of slate at face of work.
28	Mike Kitt,	Austrian,	Driver,	30	M.	Hickory Ridge,		Leg fractured. Caught between mine car and mule.
Feb. 11	Lewis Karchinskie,	Polish,	Miner,	25	S.	Hickory Ridge,		Jaw fractured and face lacerated by fall of coal at face of chute.
March 1	Edward Poplaskie,	Polish,	Laborer,	20	S.	Luke Fidler,		Leg fractured by fall of rock at face of gangway.
20	Joseph Kulich,	Slavonian,	Miner,	35	M.	Stirling,		Burned by gas.
	And. Schuman,	Polish,	Miner,	37	M.			
31	Frank Aley,	American,	Driver,	21	S.	Hickory Swamp,		Hips bruised between mine cars.
April 14	George Konyar,	Polish,	Miner,	28	S.	North Franklin,		Left leg broken by fall of coal at face of chute.
22	Michael Lynch,	Irish,	Starter,	24	S.	Corbin,		First finger of left hand blown off from second joint by premature explosion of a charge of dynamite.
May 8	Alex. Treloskie,	Lithuanian,	Miner,	52	M.	Stirling,		Leg fractured by fall of slate at face of breast.

TABLE 5—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Colliery	County	Nature and Cause of Accident in Brief
May 13	William Ambrose,	Polish,	Miner,	29	S.	Henry Clay,	Northumberland,	Ankle dislocated. He pulled a piece of slate on it while on his way down the manway.
17	Richard Tyack,	American,	Miner,	42	M.	Hickory Swamp,		Right foot fractured by a piece of slate falling on it at face of gangway.
June 3	Stani Locoskie,	Polish,	Driver,	20	S.	Buck Ridge,		Leg fractured by a piece of coal that rolled down the slope.
9	Martin Collier,	Irish,	Laborer,	46	M.	Burnside,		Leg fractured by mine car running over him. Outside.
10	Frank S. Henninger,	American,	Miner,	30	S.	Stirling,		Ribs fractured by fall of coal at face of breast.
23	Martin Wasco,	Polish,	Miner,	32	M.	Colbert,		Back bruised by fall of slate at face of gangway.
July 13	Michael Purcell,	American,	Laborer,	25	S.	Bear Valley,		Leg and collar bone broken by fall of coal while timbering gangway.
22	George Renn, Jr.,	American,	Miner,	22	S.	North Franklin,		Face, hands and body burned by explosion of keg of powder.
Sept. 1	John Konyac, Sr.,	Polish,	Miner,	25	M.	North Franklin,		Face and hands lacerated by a blast. He cut the match.
9	Steve Reish,	Russian,	Miner,	56	M.	Stirling,		Back injured by fall of coal at face of breast.
23	James Cavanaugh,	Irish,	Driver,	23	M.	Burnside,		Leg crushed by mine cars.
30	John Baskins,	American,	Miner,	39	M.	Henry Clay,		Hip dislocated by fall of slate at face of breast.
Oct. 27	John Yaluskie,	Polish,	Miner,	22	S.	Hickory Ridge,		Ankle fractured by fall of slate at face of breast.
28	Peter Franks,	American,	Driver,	25	M.	Hickory Swamp,		Collar bone fractured by scraper falling on him in boiler house. Outside.
Nov. 19	Elmer Paul,	German,	Driver,	27	S.	Burnside,		Leg fractured by mine cars.
Dec. 1	Fred Henninger,	American,	Laborer,	35	S.	Colbert,		Ankle fractured by cast iron pipe. While conveying cast iron pipes on a truck down the slope the truck was derailed and one of the pipes struck him.

Dec.	6	Floyd Gilham,	American,	Miner,	24	M.	North Franklin,	Northumberland,	Head lacerated by fall of top coal at working face.
	11	John Gerniskie,	Greek,	Miner,	34	S.	Cameron,		Leg fractured by fall of slate at working face.
	17	Thomas Vangilder,	American,	Laborer,	17	S.	North Franklin,		Arm fractured by mine cars. Outside.
	22	Joe Sulisarick,	Russian,	Miner,	60	M.	Luke Fidler,		Legs fractured by fall of coal from rib of breast.
	23	Thomas Elliott,	American,	Laborer,	19	S.	Hickory Swamp,		Body bruised by rush of coal in chute. Outside.

CONDITION OF COLLIERIES

PHILADELPHIA AND READING COAL AND IRON COMPANY

North Franklin.—Ventilation fair. Drainage good. Condition as to safety, good.

Bear Valley.—Ventilation fair. Drainage good. Condition as to safety, good.

Burnside.—Ventilation fair. Drainage good. Condition as to safety, good.

Stirling.—Ventilation fair. Drainage good. Condition as to safety, good.

Henry Clay.—Ventilation and drainage good. Condition as to safety, good.

Big Mountain.—Ventilation fair. Drainage good. Condition as to safety, good.

MINERAL RAILROAD AND MINING COMPANY

Cameron.—Ventilation and drainage fair. Condition as to safety, good.

Luke Fidler.—Ventilation and drainage fair. Condition as to safety, good.

Hickory Ridge.—Ventilation good. Drainage fair. Condition as to safety, good.

Hickory Swamp.—Ventilation and drainage fair. Condition as to safety, good.

EXCELSIOR COAL COMPANY

Corbin.—Ventilation good. Drainage fair. Condition as to safety, good.

SHIPMAN KOAL COMPANY

Colbert.—Ventilation and drainage fair. Condition as to safety, good.

BUCK RIDGE COAL COMPANY

Buck Ridge No. 2.—Ventilation fair. Drainage good. Condition as to safety, good.

TREVORTON COLLIERY COMPANY

Katherine.—Ventilation fair. Drainage good. Condition as to safety, good.

IMPROVEMENTS

PHILADELPHIA AND READING COAL AND IRON COMPANY

North Franklin Colliery.—A tunnel was driven in the West Rennie from No. 8 to the No. 5 vein, a distance of 69 1-3 yards.

A tunnel was driven for a cross-cut in the East Rennie from No. 8½ vein to No. 9 vein, a distance of 33 yards.

A tunnel was driven in the No. 2 slope, second lift, west gangway, from No. 8½ vein to No. 8 vein, a distance of 21 2-3 yards.

A tunnel was driven in the No. 2 slope, second lift, west gangway, from No. 8½ vein to No. 8 vein, a distance of 16 yards.

A single track slope is being sunk to the basin of No. 8½ vein from No. 2 east Rennie gangway.

A single track slope is being sunk in No. 5 vein from East Rennie gangway.

Bear Valley Colliery.—A tunnel was driven in the No. 1 shaft, west gangway, from No. 8 to No. 5 vein, a distance of 123 yards.

A tunnel was driven in the East water level from No. 5 vein to No. 7 vein, a distance of 111 yards.

A tunnel was driven, for the purpose of robbing, in the East water level from No. 5 vein to No. 7 vein, a distance of 50 yards.

A single track slope is being sunk in No. 5 vein from East water level gangway.

Stirling Colliery.—A tunnel was driven in the fourth lift, west gangway, from No. 10 vein to the saddle of No. 9 vein, a distance of 120 yards.

A tunnel was driven in the underground slope, first lift, from No. 9 vein to No. 7 vein, a distance of 148 1-3 yards.

A tunnel was driven in the fourth lift from No. 6 vein to No. 7 vein, a distance of 26 2-3 yards.

An air tunnel was driven in the fourth lift from No. 10½ vein to No. 11 vein, a distance of 42 2-3 yards.

MINERAL RAILROAD AND MINING COMPANY

Cameron Colliery.—A tunnel was driven from No. 4 vein to No. 2 vein, a distance of 192 yards.

A two-story concrete building, 20 feet by 45 feet, was erected for an office.

A concrete block building, 25 feet by 25 feet, was erected for an electric plant, containing a Ridgway engine, 17 inches by 15 inches, of 185 horse power, to operate a direct current dynamo generator, 120 K. W. 275 to 300 volts 400 amperes.

Two 7-ton electric motors have been installed, one to transport coal from the western part of the mines and the other from the eastern part of the mines to the bottom of the slopes.

A complete system of electric lighting for the breaker, the office and the inside workings, was installed.

Luke Fidler Colliery.—A concrete block building, 12 feet by 12 feet, was erected to be used as a central rescue station. It contains four oxygen helmets, four Draeger electric lamps, three oxygen tanks to supply the helmets with oxygen, and three Draeger resuscitating appliances.

A tunnel was driven from No. 2 vein to No. 4 vein, a distance of 620 feet.

Hickory Swamp Colliery.—A tunnel was driven from No. 4 vein south dip to No. 8 vein north dip, a distance of 740 feet.

A pump room in No. 3 slope was completed during the year. It was driven from No. 4 vein to No. 5 vein, a distance of 70 feet, 10 feet wide and 8 feet high.

A sump, 159 feet long, was driven during the year.

SHIPMAN KOAL COMPANY

Colbert Colliery.—A tunnel was driven in the fourth lift east from the inside slope, from No. 4 vein to No. 5 vein, a distance of 119 feet. They are working the No. 5 vein now on four different levels, which will add largely to the production.

A tunnel was driven in the water level gangway from No. 8 vein to No. 9 vein, a distance of 37 feet.

A tunnel was driven in the slant slope from No. 9 vein to No. 8 vein, a distance of 80 feet.

A car hoist has been erected a short distance from the tip, and the road bed between the shaft and the breaker has been changed so that the mine cars will run by gravity to the dump.

A centrifugal pump has been erected close to the creek channel so that an abundant supply of water can be obtained at all times for the preparation of coal.

TREVORTON COLLIERY COMPANY

Katherine Colliery.—A new breaker of 500 tons per day capacity has been erected during the year. It is equipped with machinery and appliances necessary for the preparation of coal, and is operated by a Ridgway engine of 140 horse power.

A coal plane, 2,200 feet long, has been built to convey the coal from the mines to the breaker, and is operated by a 70 horse power Stine engine.

A rock plane 400 feet long has been built, and is operated by a 40 horse power engine.

A 7-foot mine fan, operated by a 20-horse power engine, has been installed.

One 300 horse power Maxim water tube boiler has been installed and supplies the steam for the operation of the colliery.

MINE FOREMEN'S EXAMINATIONS

The annual examination of applicants for certificates of qualification as Mine Foremen and Assistant Mine Foremen was held in Union Hall, Pottsville, March 23 and 24.

The Board of Examiners was composed of the following members: Martin McLaughlin, Mine Inspector, Shamokin; E. A. Rhoads, Superintendent, Shenandoah; Patrick Ryan, Miner, Shamokin; James O'Rourke, Miner, Trevorton.

The following persons passed a satisfactory examination and were recommended for certificates:

Mine Foremen

Jos. H. Reiland, Shamokin; Wm. J. Batman, Trevorton.

Assistant Mine Foremen

John V. Berry, Shamokin; Adam Bingeman, Trevorton; Theodore J. Schwartz, Shamokin; Michael McCormick, Shamokin.



SEVENTEENTH DISTRICT

CARBON AND SCHUYLKILL COUNTIES

Lansford, Pa., February 28, 1910.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor of transmitting herewith my annual report as Inspector of Mines of the Seventeenth Anthracite District, for the year ending December 31, 1909.

Respectfully submitted,

ISAAC M. DAVIES,
Inspector.

SUMMARY OF STATISTICS

Number of collieries,	15
Number of mines,	36
Number of mines in operation,	36
Number of tons of coal shipped to market,	3,350,377
Number of tons used at mines for steam and heat,	423,899
Number of tons sold to local trade and used by employes,	129,671
Number of tons produced,	3,903,947
Number of tons produced by compressed air machines,	.....
Number of tons produced by electrical machines,	.....
Number of persons employed inside of mines,	5,319
Number of persons employed outside,	2,681
Number of fatal accidents inside of mines,	23
Number of fatal accidents outside,	11
Number of non-fatal accidents inside of mines,	30
Number of non-fatal accidents outside,	14
Number of tons of coal produced per fatal accident inside,	169,737
Number of persons employed per fatal accident inside,	231
Number of persons employed per fatal accident outside,	244
Number of persons employed per non-fatal accident inside,	177
Number of persons employed per non-fatal accident outside,	192
Number of wives made widows,	22
Number of children made orphans,	52
Number of steam locomotives used inside of mines,	11
Number of steam locomotives used outside,	33
Number of compressed air locomotives used inside,	1
Number of compressed air locomotives used outside,	.....
Number of electric motors used inside,	28
Number of electric motors used outside,	5
Number of fans in use,	17
Number of furnaces in use,	.....
Number of gaseous mines in operation,	17
Number of non-gaseous mines in operation,	19
Number of new mines opened,	4
Number of old mines abandoned,	4

TABLE A

PRODUCTION OF COAL

Names of Operators	Tons
Lehigh Coal and Navigation Company,	3,009,722
Estate A. S. Van Wickle,	328,582
Beddall Brothers and Company,	208,613
Coxe Brothers and Company, Incorporated,	201,415
Evans Colliery Company,	23,885
Lehigh Valley Coal Company,	117,997
Moses Neyer,	7,167
Hacklebernie Coal Company,	6,566
Total,	3,903,947

Production by Counties

Carbon,	2,261,641
Schuylkill,	1,642,306
Total,	3,903,947

TABLE B.—Fatal and non-fatal accidents inside and outside of mines; number of tons of coal produced per accident; number of persons employed; number employed per accident

Names of Operators	Fatal Accidents			Non-Fatal Accidents			Tons of coal produced per fatal accident inside	Tons of coal produced per non-fatal accident inside	Number of employes inside	Number of employes outside	Total number of employes	Number of employes inside per fatal accident	Number of employes outside per fatal accident	Number of employes inside per non-fatal accident	Number of employes outside per non-fatal accident
	Inside	Outside	Total	Inside	Outside	Total									
Lehigh Coal and Navigation Co.,	20	10	30	21	9	30	150,486	143,320	4,508	2,011	6,519	225	201	215	223
Estate A. S. Van Wickle,	2		2	4	2	6	164,291	82,146	458	312	770	229		114	156
Beddall Brothers and Co.,					1	1			9	105	114				105
Coxe Brothers and Co., Incorporated,	1	1	2	3	2	5	201,415	67,138	239	171	410	239	171	80	85
Evans Colliery Co.,				2		2		11,942	85	40	125			42	
Miscellaneous Companies,									20	42	62				
Totals and averages for district,	23	11	34	30	14	44	169,737	130,132	5,319	2,681	8,000	231	244	177	192

TABLE C.--Classification of Fatal Accidents Inside and Outside of Mines

	Months													
	January	February	March	April	May	June	July	August	September	October	November	December	Totals	Percentages
Causes of Accidents Inside														
Falls of coal,						1					1		2	8.70
Falls of roof,		1						1					2	8.70
Mine cars,								1	1	1			3	13.04
Explosions of gas,						1		1					2	8.70
Suffocation by gas, etc.,											2		2	8.70
Explosions of powder and dynamite,											1		1	4.35
Blasts, premature and otherwise,						1						1	2	8.70
Falling into slopes, etc.,					1								1	4.34
Mules,												1	1	4.34
Electricity,						1					1	1	3	13.04
Miscellaneous,			1	1		1						1	4	17.39
Totals,		1	1	1	1	5		3	1	1	5	4	23	100.00
Causes of Accidents Outside														
Cars,		1			1								2	18.18
Machinery,										1		1	2	18.18
Suffocation in chutes, etc.,												4	4	36.36
Miscellaneous,				1			1					1	3	27.28
Totals,		1		1	1		1			1		6	11	100.00
Grand totals inside and outside,		2	1	2	2	5	1	3	1	2	5	10	34	

TABLE D.—Classification of Non-Fatal Accidents Inside and Outside of Mines

	Months													
	January	February	March	April	May	June	July	August	September	October	November	December	Totals	Percentages
Causes of Accidents Inside														
Falls of coal,							1		1				2	6.67
Falls of slate,	1					1							2	6.67
Mine cars,								2		1	1	1	5	16.67
Explosions of gas,		1	1			4		1					7	23.33
Explosions of powder and dynamite,					1								1	3.33
Blasts, premature and otherwise,					1	3						2	6	20.00
Crushed at batteries,	1												1	3.33
Miscellaneous,	1	1		1			1	1			1		6	20.00
Totals,	3	2	1	1	2	8	2	4	1	1	2	3	30	100.00
Causes of Accidents Outside														
Cars,										1	1	2	4	28.57
Machinery,					1			1					2	14.29
Miscellaneous,	1		1	1							2	3	8	57.14
Totals,	1		1	1	1			1		1	3	5	14	100.00
Grand totals inside and outside,	4	2	2	2	3	8	2	5	1	2	5	8	44	

TABLE E.—Occupations of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Inside													
Miners,		1			1	3		1			8	2	11
Miners' laborers,				1		2		2	1	1	2	1	10
Drivers and runners,												1	1
Pole boys,			1										1
Totals,		1	1	1	1	5		3	1	1	5	4	23
Outside													
Engineers and firemen,										1		1	2
Chutetenders,												1	1
Miners,							1						1
Laborers,												4	4
Drivers,		1		1									2
Oilers,					1								1
Totals,		1		1	1		1			1		6	11
Grand totals inside and outside,		2	1	2	2	5	1	3	1	2	5	10	34

TABLE F.—Occupations of Persons Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Inside													
Miners,	2	1	1		1	3	2		1	1			12
Miners' laborers,		1		1		2		3			1	2	10
Drivers and runners,						1							1
Doorboys and helpers,								1			1		2
Company men,	1					2						1	4
Loaders,					1								1
Totals,	3	2	1	1	2	8	2	4	1	1	2	3	30
Outside													
Engineers and firemen,					1								1
Slatepickers (boys),											2		2
Laborers,	1							1		1	1	3	7
Miners,												1	1
Machinists,				1									1
Oilers,												1	1
Patchers,			1										1
Totals,	1		1	1	1			1		1	3	5	14
Grand totals inside and outside,	4	2	2	2	3	8	2	5	1	2	5	8	44

TABLE G.—Nationality of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
American,			1			1				1		2	5
English,							1						1
Welsh,											1		1
Polish,				1				2				1	4
Hungarian,				1		1							2
Italian,						1				1			2
Slavonian,		2			1	2		1			4	7	17
Russian,					1				1				2
Totals,		2	1	2	2	5	1	3	1	2	5	10	34

TABLE H.—Nationality of Persons Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
American,	1		1	1	2	1		2			2	1	11
English,		1											1
Welsh,						1							1
Irish,					1	1						1	3
German,			1			1			1				3
Polish,							1						1
Hungarian,				1			1	1		1			4
Italian,	2					1		1			1	1	6
Slavonian,		1				2		1			2	5	11
Lithuanian,										1			1
Austrian,						1							1
Russian,	1												1
Totals,	4	2	2	2	3	8	2	5	1	2	5	8	44

TABLE I.—Operators and mines, kind of openings, type and size of fans, size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents and number of persons employed inside

Names of Operators and Mines	Kind of opening	Gaseous or non-gaseous	Method of ventilation	Diameter of fan in feet and inches	Width of blades in feet and inches	Depth of blades in feet and inches	Number of revolutions per minute	Water gauge developed—in inches	Name of fan	Power used	Number of splits of air currents	Number of cubic feet of air per minute entering the mine at inlet	Total quantity of air per minute circulating in all the splits in cubic feet	Number of cubic feet per minute passing out at outlet	Number of persons employed inside
Lehigh Coal and Navigation Co.															
Colliery No. 1:															
Number 1,	Tunnel,	Gaseous,	Fan,	15	5	3.9	90	1.9	Guibal,	Steam,	8	45,500	40,350	58,000	141
Number 2,	Shaft,	Gaseous,	Fan,	24	8	6.0	63	1.8			7	72,945	56,550	74,000	155
Number 3,	Slope,	Gaseous,	Fan,	16	8	4.0	120	------			2	17,500	16,000	20,500	87
Colliery No. 4:															
Number 4,*	Shaft,	Non-gas.,	Fan,	10	5	1.6	------	------	Sturdevant,	Steam,	----	----	----	----	----
Number 4,	Slope,	Gaseous,	Fan,	24	8	7.0	90	1.8	Co. make,	Steam,	4	105,485	94,074	108,300	298
Colliery No. 5:															
Number 5,	Shaft,	Gaseous,	Fan,	21	7	5.3	50	2.3	Guibal,	Steam,	7	69,060	58,248	75,000	29
Colliery No. 6:															
Number 6,	Shaft,	Gaseous,	Fan,	24	8	6.0	100	2.0	Guibal,	Steam,	3	35,492	32,151	38,500	148
Colliery No. 8:															
Number 8,	Shaft,	Gaseous,	Fan,	24	8	6.0	70	1.9	Guibal,	Steam,	4	67,953	60,484	81,000	173
Number 8,	Slope,	Gaseous,	Natural,	------	------	------	------	------	------	------	----	----	----	----	----
Colliery No. 9:															
Number 9,	Shaft,	Gaseous,	Fan,	24	8	6.0	80	1.5	Guibal,	Steam,	5	62,375	59,650	70,572	160

*New shaft driving South Tunnel.

Colliery No. 10:																
Number 10,	Shaft,	Gaseous,	Fan,	24	8	6.0	80	2.2	Guibal,	Steam,	4	44,750	40,500	49,200	144
Number 10,	Slope,	Gaseous,	Fan,	24	8	6.0	80	1.8			5	51,300	49,240	53,000	178
Number 10,	Tunnel,	Gaseous,	Fan,	12	4	4.0	70								
Colliery No. 11:																
Number 11,	Shaft,	Gaseous,	Fan,	24	8	6.0	75	2.3	Guibal,	Steam,	5	100,500	92,500	103,000	294
Fosters Tunnel,	Tunnel,	Gaseous,	Fan,	21	7	5.3		.8	Guibal,	Steam,	4	61,980	44,820	64,500	126
Colliery No. 14:																
Number 14,	Shaft,	Gaseous,	Fans,	10	5	1.6	90	.5	Sturdevant,	Steam,	4	54,675	50,445	55,470	86
				12	4	4.0	100	.6							
Estate A. S. Van Wickle.																
Coleraine Colliery:																
Buck Mountain,	Slope,	Gaseous,	Fan,	16	4	5.0	85		Guibal,	Steam,	5	53,395	48,355	55,870	182
Coxe Brothers and Co., Inc.																
Beaver Meadow Colliery:																
Number 2,	Slope,	Non-gas.,	Fan,	20	6	5.6	90	.75	Guibal,	Steam,	1	16,560	14,370	17,500	33
Number 4,	Slope,	Non-gas.,	Fan,	12	5	5.6	110	.40	Guibal,	Steam,	3	47,100	14,600	49,300	52

Note:—19 non-gaseous mines, in which principal work done is robbing. No air measurements taken.

TABLE 1.—Operators, location of collieries, railroads, etc.

Names of Operators and Collieries	County	Name of General Superintendent	Post Office	Name of Superintendent	Post Office	Railroad to Mine
Lehigh Coal and Navigation Co.						
Colliery No. 1,	Carbon,					
Colliery No. 4,	Carbon,					
Colliery No. 5,	Carbon,					
Colliery No. 6,	Carbon,	Baird Snyder, Jr.,	Lansford,	S. V. Tench,	Lansford,	C. R. R. of N. J.
Colliery No. 8,	Schuylkill,					
Colliery No. 9,	Carbon,					
Colliery No. 10,	Schuylkill,					
Colliery No. 11,	Schuylkill,			W. G. Whildin,		
Colliery No. 14,	Schuylkill,			W. G. Whildin,		
Washery No. 12,	Schuylkill,	Baird Snyder, Jr.,	Lansford,	W. G. Whildin,	Lansford,	C. R. R. of N. J.
Washery No. 15,	Schuylkill,			W. G. Whildin,		
Screen Building,	Carbon,			S. V. Tench,		
Estate A. S. Van Wickle						
Coleraine,	Carbon,	John Harvey,	Hazleton,			L. V., C. R. R. of N. J. and P. and R.
Beddall Brothers and Co.						
Greenwood No. 13,	Schuylkill,	M. A. Gerber,	Tamaqua,			C. R. R. of N. J.
Coxe Brothers and Co., Inc.						
Beaver Meadow,	Carbon,	S. D. Warriner,	Wilkes-Barre,	W. H. Davies,	Hazleton,	Lehigh Valley
Evans Colliery Co.						
Beaver Meadow,	Carbon,	W. E. Smith,	Hazleton,			Lehigh Valley
Moses Neyer						
Black Rock,	Carbon,	Moses Neyer,	Summit Hill,	Elmer Neyer,	Summit Hill,	
Hacklebernie Coal Co.						
Hacklebernie Tunnel,	Carbon,	D. S. Pursell,	Mauch Chunk,			C. R. R. of N. J.
Lehigh Valley Coal Co.						
Leviston Washery,	Carbon,	S. D. Warriner,	Wilkes-Barre,	W. H. Davies,	Hazleton,	Lehigh Valley

TABLE 2. - Number of tons of coal mined, number of days worked, number of persons employed, number killed and injured, quantity of powder, dynamite and so-called safety explosives used, etc.

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Explosives		Number of horses and mules
										Number of pounds of powder used	Number of pounds of dynamite used	
Lehigh Coal and Navigation Co.												
Colliery No. 1,	Carbon,	455,595	43,271	3,556	502,422	248	1,131	6	3	12,950	219,474	64
Colliery No. 4,	Carbon,	202,485	41,772	13,262	257,519	258	589	4	2		55,830	22
Colliery No. 5,	Carbon,	70,917		6,057	76,974	122	340	2		350	55,213	14
Colliery No. 6,	Carbon,	272,296	47,582	13,703	333,581	272	687	3	7	50	97,706	67
Colliery No. 8,	Schuylkill,	316,661	30,435	14,722	361,818	267	818	3	10	300	66,038	62
Colliery No. 9,	Carbon,	314,307	33,511	22,472	370,290	261	711	2	2	450	110,481	40
Colliery No. 10,	Schuylkill,	419,658	45,543	12,969	478,170	270	922	6	2		141,490	52
Colliery No. 11,	Schuylkill,	322,026	31,921	4,335	358,282	276	788	2	1	1,150	155,557	79
Colliery No. 14,	Schuylkill,	57,773	25,520	781	84,034	394	328		1		67,756	31
		2,431,678	299,555	91,857	2,823,090		6,314	28	28	15,250	969,545	431
Washeries.												
Washery No. 12,	Schuylkill,	54,273	9,010	4,704	67,987	232	111		2			4
Washery No. 15,	Schuylkill,	69,605	12,806	991	83,402	390	94	2				
Screen Building,	Carbon,	35,243			35,243							
		159,121	21,816	5,695	186,632		205	2	2			4
Totals,		2,590,799	321,371	97,552	3,009,722		6,519	30	30	15,250	969,545	435
Estate A. S. Van Wickle												
Coleraine,	Carbon,	279,043	44,524	5,015	328,582	303	770	2	6	96,175	75,800	94

TABLE 2—Continued

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked	Number of employes	Number of fatal accidents	Number of non fatal accidents	Explosives		Number of mules and mules
										Number of pounds of powder used	Number of pounds of dynamite used	
Beddall Brothers and Co.												
Greenwood No. 13,	Schuylkill,	189,319	5,540	13,754	208,613	303	114	....	1	150	1,500	6
Coxe Brothers and Co., Incorporated												
Beaver Meadow,	Carbon,	353,534	45,864	2,017	201,415	194	410	2	5	66,750	64,360	27
Evans Colliery Co.												
Beaver Meadow,	Carbon,	16,789	6,300	796	23,885	182	125	....	2	1,575	1,855	.....
Moses Neyer												
Black Rock,	Carbon,	.....	150	7,017	7,167	276	14	....	....	.....	2,400	.....
Hacklebernie Coal Co.												
Hacklebernie Tunnel,	Carbon,	2,896	150	3,520	6,566	179	18	....	....	5,000	.....	2
Lehigh Valley Coal Co.												
Leviston Washery,	Carbon,	117,997	.....	.....	117,997	226	30	....	....	.....	.....	.....
Grand totals,		3,350,377	423,899	129,671	3,903,947	.....	8,000	34	44	184,900	1,115,400	564

TABLE 2.—Part 2.

Names of Operators	County	Number of Boilers					Locomotives			Number of steam engines of all classes	Total horse power	Number of pumps delivering water to surface	Capacity in gallons per minute	Quantity delivered to surface per minute—gallons	Number of electric dynamos	Number of air compressors
		Cylindrical	Horse power	Tubular	Horse power	Total horse power	Steam	Air	Electric							
Lehigh Coal and Navigation Co.,	Carbon, Schuylkill,	3	186	119	26,064	26,250	30	.....	33	167	9,467	19	38,908	12,954	5	10
Estate A. S. Van Wickle,	Carbon,	.....	.....	21	2,315	2,315	6	.....	.....	36	1,340	7	7,347	2,466	1	.....
Beddall Brothers and Co.,	Schuylkill,	.....	.....	8	550	550	2	.....	.....	12	192	.....	.....	.....	.....	.....
Coxe Brothers and Co., Incorporated,		.....	.....	10	2,000	2,000	6	1	.....	34	1,800	1	1,200	1,100	1	2
Evans Colliery Co.,		.....	.....	1	350	350	.....	.....	.....	6	275	2	1,400	1,200	.....	.....
Moses Neyer,	Carbon,	.....	.....	1	35	35	.....	.....	.....	2	30	.....	.....	.....	.....	.....
Hacklebernie Coal Co.,		.....	.....	1	70	70	.....	.....	.....	1	25	.....	.....	.....	.....	.....
Lehigh Valley Coal Co.,		.....	.....	.....	.....	.....	.....	.....	.....	3	300	.....	.....	.....	.....	.....
Totals,		3	186	161	31,284	31,570	44	1	33	261	13,429	29	48,855	17,720	7	12

TABLE 3.—Number of each class of employes inside and outside of mines

Names of Operators	County	Inside												Outside										Grand total inside and outside
		Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Doorboys and helpers	Pumpmen	Company men	All other employes	Total inside		Superintendents	Foremen	Blacksmiths and carpenters	Engineers and firemen	Slate pickers (boys)	Slate pickers (men)	Bookkeepers and clerks	All other employes	Total outside	
Lehigh Coal and Navigation Co.,	Carbon, Schuylkill,	15	11	45	1,218	718	250	98	16	1,049	1,088	4,508		...	21	99	331	165	147	36	1,212	2,011	6,519	
Estate A. S. Van Wickle,	Carbon,	4	1	4	190	100	35	1	6	57	.....	458		1	2	18	40	35	14	8	191	312	770	
Beddall Brothers and Co.,	Schuylkill,	1	...	...	4	2	.....	.....	.....	2	.....	9		1	1	4	8	20	.....	1	70	105	114	
Coxe Brothers and Co., Incorporated,		1	5	....	102	22	13	.....	2	56	38	239		...	1	10	23	13	25	1	95	171	410	
Evans Colliery Co.,		1	1	....	20	30	.....	.....	1	20	12	85		1	1	2	5	20	.....	1	10	40	125	
Moses Neyer,	Carbon,	1	...	....	4	.....	4	.....	...	...	.. ..	9		1	....	.....	1	.....	.....	.....	3	5	14	
Hacklebernie Coal Co.,		1	...	....	6	2	2	.....	....	.....	.....	11		....	1	....	1	4	.....	.....	1	7	18	
Lehigh Valley Coal Co.,		----	----	----	------	------	------	----	------	-----	------	-----		----	1	----	2	2	.....	.....	25	30	30	
Totals,		24	18	49	1,544	924	304	99	25	1,184	1,138	5,319		4	28	133	411	259	186	50	1,610	2,681	8,000	

TABLE 3—Part 2

Names of Operators	County	Average Number of Days Worked in Breaker												
		January	February	March	April	May	June	July	August	September	October	November	December	Total
Lehigh Coal and Navigation Co.,	Carbon, Schuylkill,	17	18	26	25	22	24	18	21	21	21	23	24	263
Estate A. S. Van Wickle,	Carbon,	25	24	27	23	25	26	26	26	25	25	25	26	303
Beddall Brothers and Co.,	Schuylkill,	19	22	26	26	25	26	21	31	27	28	26	26	303
Coxe Brothers and Co., Incorporated,	Carbon,	19	15	20	20	16	15	11	6	12	12	23	25	194
Evans Colliery Co.,	Carbon,				20	24	21	18	17	17	22	22	21	182
Hacklebernie Coal Co.,	Carbon,	25	24	26	24	22	23	20	15					179
Moses Neyer,	Carbon,	23	21	21	20	23	24	23	24	24	21	25	24	276

TABLE 4.—Fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Colliery	County	Nature and Cause of Accident in Brief
Feb. 17	Philip Mattas,	Slavonian,	Driver,	23	M.	1	1	Colliery No. 9,	Carbon,	Fatally injured by being crushed between two dump cars. Outside.
26	Mike Chopko,	Slavonian,	Miner,	33	M.	1	5	Coleraine,	Carbon,	Instantly killed by fall of roof at face of chute 32 in West Gamma gangway.
March 24	Thomas O. Miller,	American,	Pole-boy,	17	S.			Colliery No. 4,	Carbon,	Fatally injured. Crushed between timbers that were knocked out of place by motor on track to motor house.
April 16	Stiney Daunashivits,	Polish,	Laborer,	23	S.			Colliery No. 4,	Carbon,	Killed in East Straight Mammoth gangway by a rush of coal from a chute that burst.
20	Andrew Margur,	Hungarian,	Driver,	19	S.			Colliery No. 1,	Carbon,	Instantly killed on ditt plane when attempting to jump on the loaded cage when in motion. He was crushed between the boiler house landing and the cage.
May 5	Steve Sarena,	Slavonian,	Miner,	24	S.			Colliery No. 11,	Schuylkill,	Instantly killed by falling down No. 30 chute.
29	Mike Gabber,	Russian,	Car-oiler,	55	M.			Colliery No. 10,	Schuylkill,	Fatally injured between the bumpers of cars while attempting to go between them. Outside.
June 5	Ludwig Oriel,	Slavonian,	Miner,	27	S.			Colliery No. 10,	Schuylkill,	Instantly killed at No. 24 chute by a fall of rock.
8	John Yuva,	Hungarian,	Miner,	26	M.	1	1	Beaver Meadow,	Carbon,	Instantly killed by a fall of rock at face of breast.
16	David Evans,	American,	Miner,	40	M.	1	3	Colliery No. 8,	Schuylkill,	Fatally injured by an explosion of gas in Breast No. 53, East Mammoth gangway.
19	Vitto Prospery,	Italian,	Laborer,	32	S.			Colliery No. 9,	Carbon,	Fatally injured by premature blast in No. 2 tunnel from East Mammoth gangway.
30	Eleck Useko,	Slavonian,	Laborer,	23	S.			Colliery No. 10,	Schuylkill,	Killed by an electric shock while pushing a car from under Chute No. 23, West Mammoth gangway.

July	19	Thomas Floyd,	English,	Miner,	61	M.	1		Colliery No. 1,	Carbon,	Killed by an explosion of dynamite on stripping, No. 1 tunnel. Outside.
Aug.	30	Anthony Tomco,	Polish,	Laborer,	45	M.	1	1	Coleraine,	Carbon,	Killed at face of slope by being caught between car and face of slope.
		Albert Alaskas,	Polish,	Miner,	31	M.	1	2	Colliery No. 8,	Schuylkill,	Fatally injured by an explosion of gas in the Trial slope chute, West Mammoth gangway.
	31	Mike Averland,	Slavonian,	Laborer,	21	M.	1		Colliery No. 11,	Schuylkill,	Fatally injured by fall of rock at face of North tunnel.
Sept.	22	Mike Stanilla,	Russian,	Laborer,	56	M.	1	2	Colliery No. 10,	Schuylkill,	Instantly killed between the door and cars in East Mammoth gangway.
Oct.	15	James Cormerat,	Italian,	Laborer,	40	M.	1	6	Colliery No. 1,	Carbon,	Fatally injured by being run over by a trip of cars going from No. 1 to No. 2 shaft.
	28	Charles Witherow,	American,	Engineer,	17	S.			Washery No. 15,	Schuylkill,	Instantly killed by coming in contact with the machinery in the engine room. Outside.
Nov.	6	Joseph Soltis,	Slavonian,	Miner,	30	M.	1	2	Colliery No. 5,	Carbon,	Suffocated by gas while driving a rock chute from the Skidmore vein to the Mammoth vein.
		Mike Baccarrie,	Slavonian,	Laborer,	40	M.	1	1	Colliery No. 5,	Carbon,	
	8	Thomas Edwards,	Welsh,	Miner,	37	M.	1	2	Colliery No. 10,	Schuylkill,	Killed by fall of coal at face of chute, West Mammoth gangway.
		Steve Vetick,	Slavonian,	Miner,	32	M.	1		Colliery No. 4,	Carbon,	Killed by coming in contact with an electric wire in No. 9 turnout, East Mammoth vein.
	29	Andrew Holliday,	Slavonian,	Laborer,	24	M.	1		Colliery No. 1,	Carbon,	Killed by an explosion of dynamite in West Buck Mountain vein.
Dec.	2	Alex. Sevoski,	Slavonian,	Driver,	26	M.	1	2	Colliery No. 1,	Carbon,	Killed by a kick from a mule on his way out of the mine.
	10	Paul Granat,	Slavonian,	Chute-tender,	17	S.			Colliery No. 8,	Schuylkill,	Instantly killed by being caught in the scraper line traveling shaft. Outside.
	13	William H. Bond,	American,	Miner,	46	M.	1	4	Colliery No. 1,	Carbon,	Instantly killed by a premature explosion of dynamite in the East Holmes gangway.
	23	Steve Lorenchak,	Slavonian,	Laborer,	39	M.		2	Colliery No. 10,	Schuylkill,	Killed by coming in contact with an electric wire on his way to the gangway.
	24	John Gurka,	Polish,	Miner,	34	M.	1	2	Colliery No. 4,	Carbon,	Killed by a collar falling on his head in the West Mammoth gangway.
	27	Enro Chobot,	Slavonian,	Laborer,	36	M.	1	6	Washery No. 15,	Schuylkill,	Suffocated by falling into a gondola car while unloading it and being covered with coal. Outside.
	30	John Charney,	Slavonian,	Laborer,	34	M.	1	2	Colliery No. 6,	Carbon,	Suffocated by a rush of dirt bank at No. 6. Outside.
		John Barvara,	Slavonian,	Laborer,	39	M.	1	1			
		Paul Dobravo,	Slavonian,	Laborer,	35	S.					
	31	William Boettner,	American,	Engineer,	28	M.	1	4	Beaver Meadow,	Carbon,	Fatally injured by striking his head against a piece of ice under the coal chute while looking out of the cab window. Outside.

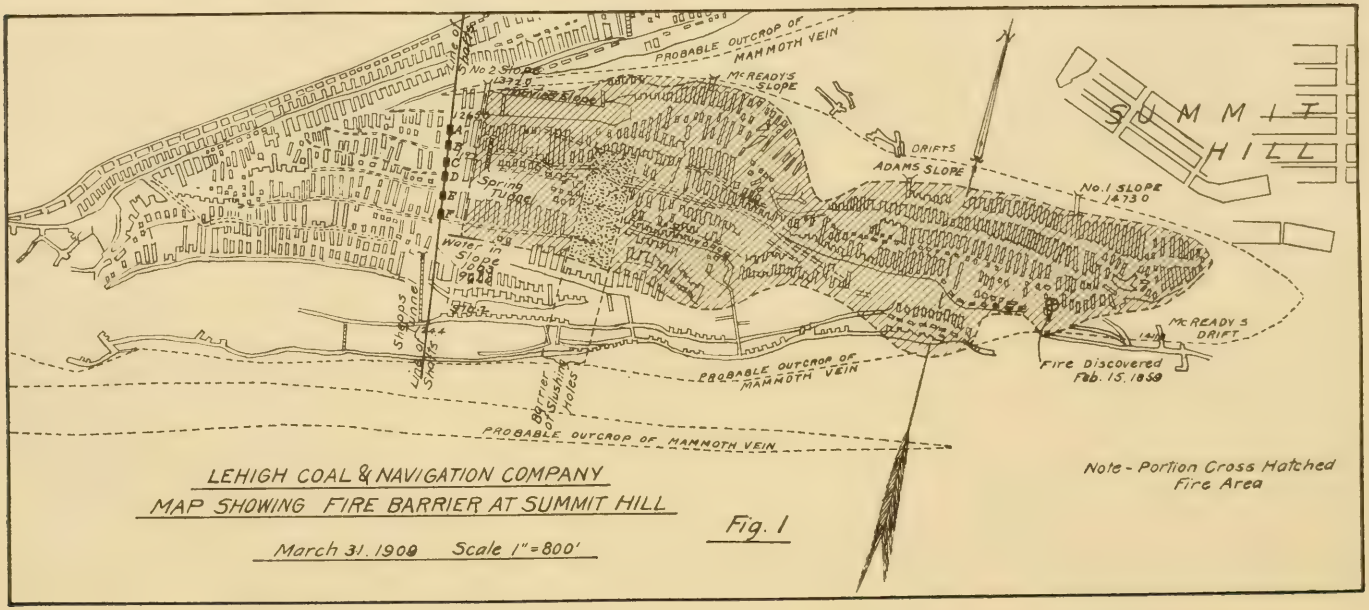
TABLE 5.—Non-fatal accidents inside and outside of mines

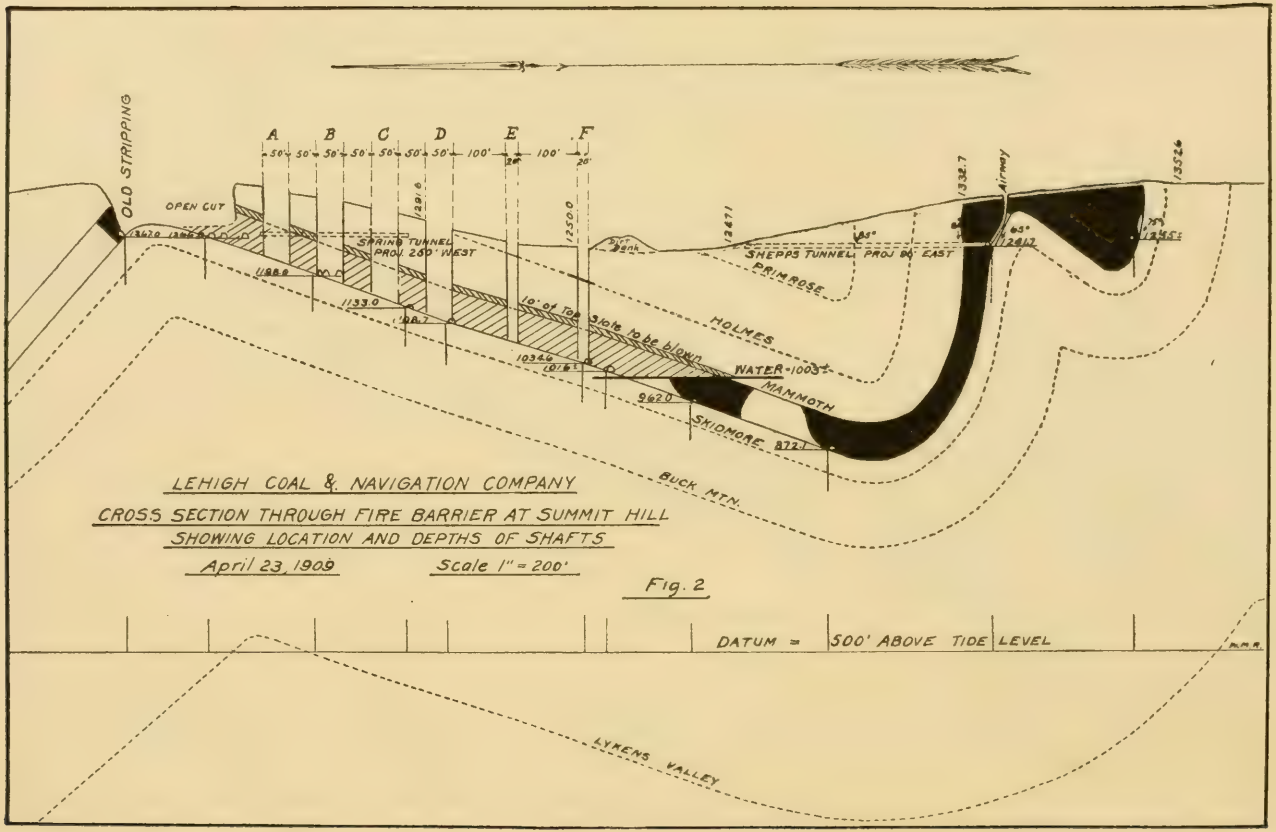
Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Colliery	County	Nature and Cause of Accident in Brief
Jan. 12	George Papinchak,	Russian,	Miner,	47	M.	Colliery No. 4,	Carbon,	Leg fractured while starting battery.
	William Sambler,	American,	Miner,	45	M.	Beaver Meadow,	Carbon,	Hip contused by fall of slate at face of breast.
28	Perte Deleman,	Italian,	Laborer,	42	M.	Coleraine,	Carbon,	Scalp lacerated. Struck by flying piece of rock from rock blast on stripping. Outside.
30	Toney Farmingo,	Italian,	Company man,	22	M.	Beaver Meadow,	Carbon,	Leg fractured by being caught in jaws of barney on slope.
Feb. 24	Benjamin Howels,	English,	Miner,	58	M.	Colliery No. 6,	Carbon,	Hands and face burned by explosion of gas.
25	Paul Oriel,	Slavonian,	Laborer,	23	M.	Colliery No. 8,	Schuylkill,	Skull fractured. Struck by descending cage.
March 3	John Coyle,	American,	Patcher,	18	S.	Beaver Meadow,	Carbon,	Leg fractured by being caught by the swing of wire rope on stripping. Outside.
18	William Buck,	German,	Miner,	50	M.	Colliery No. 1,	Carbon,	Hands and face burned in No. 1 tunnel by explosion of gas.
April 1	Robert McKnight,	American,	Laborer,	22	S.	Colliery No. 10,	Schuylkill,	Base of brain fractured by being struck by falling punch block while examining shaft after firing.
8	George Katchmer,	Hungarian,	Machinist,	42	M.	Beaver Meadow,	Carbon,	Eye injured while chipping a casting. Outside.
May 17	Elijah Filer,	American,	Loader,	35	M.	Colliery No. 10,	Schuylkill,	Eye blown out and hand shot off by explosion of dynamite.
18	Neil McNeils,	American,	Fireman,	28	S.	Washery No. 12,	Schuylkill,	Arm and side lacerated. Caught in cogs of steam shovel crane beam. Outside.
24	Frank McCann,	Irish,	Miner,	47	M.	Colliery No. 6,	Carbon,	Face, eyes and arm lacerated by blast. He was drilling out a hole that had missed when it exploded.
June 9	George Byatt,	Welsh,	Miner,	42	M.	Colliery No. 8,	Schuylkill,	Leg fractured by piece of slate falling from face of chute.

June	16	Edward McNelius,	American,	Miner,	44	M.			Hands and face slightly burned by explosion of gas.
		John Chlea,	Slavonian,	Company man,	49	M.			
		Alfred O'Brien,	Irish,	Company man,	24	M.	Colliery No. 8,	Schuylkill,	
		Ludwig Poropusky,	Slavonian,	Driver,	20	S.			
	19	Elli Capellie,	Italian,	Laborer,	22	S.	Colliery No. 9,	Carbon,	Hands, face and chest cut by premature blast.
		Frank Reed,	German,	Miner,	38	M.	Beaver Meadow,	Carbon,	Eye and face slightly injured by premature blast.
		Louis Taller,	Austrian,	Laborer,	27	M.	Beaver Meadow,	Carbon,	Face and chest bruised by premature blast.
July	19	John Screenock,	Hungarian,	Miner,	48	M.	Beaver Meadow,	Carbon,	Pelvis bruised by coal falling off rib of breast.
	22	John Vitk,	Polish,	Miner,	30	M.	Coleraine,	Carbon,	Leg fractured while removing plank from under a rock.
Aug.	6	Fred Roberts,	Italian,	Laborer,	42	S.	Greenwood No. 13,	Schuylkill,	Leg and ribs broken by falling on flywheel. Outside.
		William Watkins,	American,	Laborer,	61	M.	Coleraine,	Carbon,	Leg broken by car being derailed near foot of slope.
	21	Thomas Hordich,	Hungarian,	Laborer,	45	M.	Coleraine,	Carbon,	Ankle fractured by piece of rock that fell from gob.
	28	Roy Taylor,	American,	Patcher,	17	S.	Colliery No. 4,	Carbon,	Four toes fractured by being caught between rope and car frame while sidehitching cars on turnout.
	30	Albert Miller,	Slavonian,	Laborer,	24	S.	Colliery No. 8,	Schuylkill,	Hands and face burned by explosion of gas.
Sept.	15	William Schilbe,	German,	Miner,	54	M.	Colliery No. 8,	Schuylkill,	Hands cut, back bruised and rib fractured by fall of coal in face of chute.
Oct.	11	George Kosher,	Hungarian,	Laborer,	35	S.	Colliery No. 6,	Carbon,	Concussion of brain by being thrown from a lever while assisting in putting a derailed car on the track. Outside.
	19	William Fritz,	Lithuanian,	Miner,	29	M.	Colliery No. 11,	Schuylkill,	Hip and body bruised by being caught between car and timber on gangway.
Nov.	3	Thomas Porembo,	Slavonian,	Slatepicker,	15	S.	Colliery No. 9,	Carbon,	Face, chest and abdomen burned. He came in contact with hot stove when a portion of the building fell. Outside.
	4	Mike Doish,	Slavonian,	Laborer,	44	S.	Colliery No. 8,	Schuylkill,	Internally injured by being knocked down by car. Outside.
		Joseph Turnbach,	American,	Patcher,	16	S.	Coleraine,	Carbon,	Femur fractured. Caught between moving car and prop on gangway.
	17	James O'Donnell,	American,	Slatepicker,	15	S.	Washery No. 12,	Schuylkill,	Skull fractured. He fell ten feet while hurrying to leave work at quitting time. Outside.
	29	Angelo Bartotto,	Italian,	Laborer,	22	S.	Colliery No. 14,	Schuylkill,	Concussion of brain and ribs fractured. He was about to open a door in the tunnel when the door suddenly opened, knocking him down. The door was opened by the firing of a round of holes in the tunnel.
Dec.	7	Simon Hauto,	Slavonian,	Car oiler,	16	S.	Colliery No. 8,	Schuylkill,	Half of foot taken off while uncoupling lokie from trip of cars. Outside.

TABLE 5—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Colliery	County	Nature and Cause of Accident in Brief
Dec. 13	John M. Peterock,	Slavonian,	Laborer,	35	M.	Colliery No. 1,	Carbon,	Face lacerated by rock from premature blast.
	Paul Vaulick,	Slavonian,	Laborer,	24	S.	Colliery No. 1,	Carbon,	Hands and face slightly cut by rock from premature blast.
	Charles McGarvey,	Irish,	Miner,	60	M.	Coleraine,	Carbon,	Rib fractured by fall of coal on strip ping. Outside.
21	George Trusa,	Slavonian,	Laborer,	24	M.	Colliery No. 6,	Carbon,	Spine injured by falling off boardwalk. Outside.
29	Dominick Demicari,	Italian,	Laborer,	25	S.	Colliery No. 6,	Carbon,	Both knees injured by being caught between cars. Outside.
30	John Murosky,	Slavonian,	Laborer,	55	M.	Colliery No. 6,	Carbon,	Hand crushed by piece of rock that fell off top of car. Outside.
31	Richard Sauler,	American,	Company man,	30	S.	Colliery No. 6,	Carbon,	Left arm and cheek bone fractured. Caught between empty car and rib near top of car hoist at foot of shaft.


PROBABLE OUTCROP OF MAMMOTH VEIN
No 2 Slope
McREADYS SLOPE
SUMMIT HILL
DRIFTS
ADAMS SLOPE
No.1 SLOPE
Spring Tunnel
Water in Slope
McREADYS DRIFT
Fire Discovered Feb. 15. 1859
PROBABLE OUTCROP OF MAMMOTH VEIN
Barrier of Culm & Holes
PROBABLE OUTCROP OF MAMMOTH VEIN
LEHIGH COAL & NAVIGATION COMPANY
MAP SHOWING FIRE BARRIER AT SUMMIT HILL
March 31. 1909 Scale 1"=800'
Fig. 1
Note - Portion Cross Hatched Fire Area



LEHIGH COAL & NAVIGATION COMPANY

CROSS SECTION THROUGH FIRE BARRIER AT SUMMIT HILL
SHOWING LOCATION AND DEPTHS OF SHAFTS

April 23, 1909 Scale 1" = 200'

Fig. 2

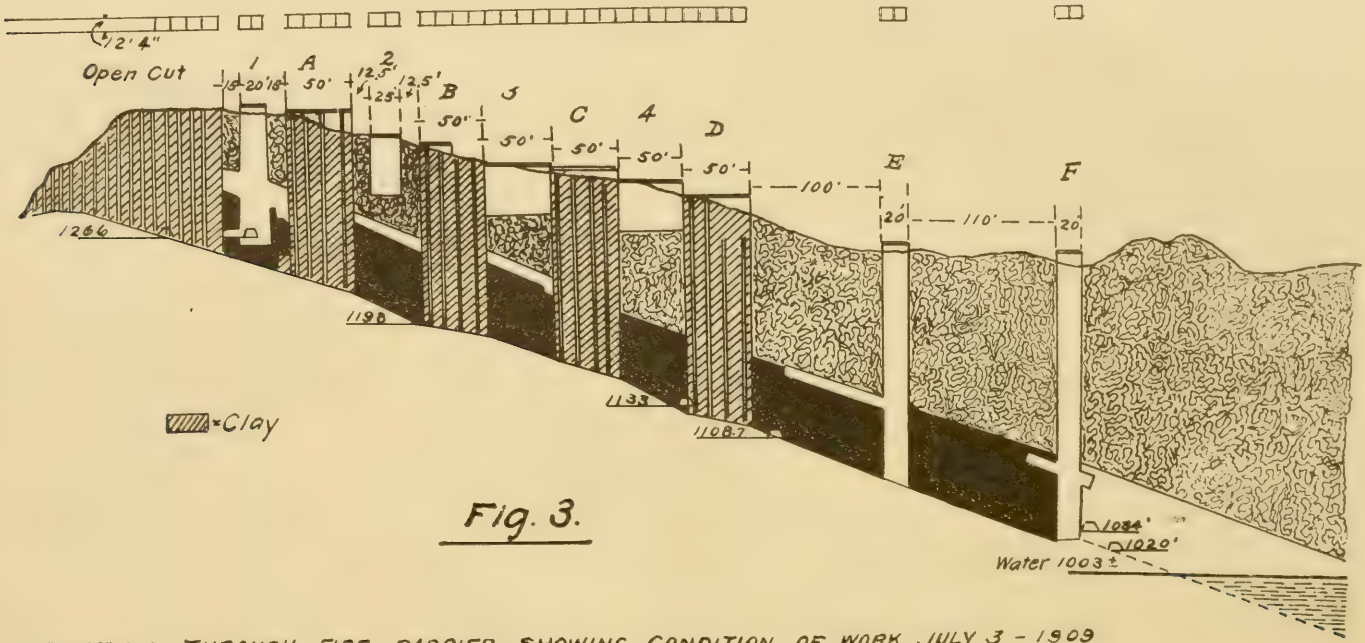


Fig. 3.

SECTION THROUGH FIRE BARRIER SHOWING CONDITION OF WORK JULY 3 - 1909

REPORT OF THE FIRE-BARRIER AT SUMMIT HILL FIRE

The following is a brief and imperfect description of one of the greatest engineering feats ever attempted in this country, possibly in the world—the cutting off of a mine fire that had already consumed millions of tons of coal and threatened to burn up many millions more, which would have turned the Panther Valley into one vast volcano. To check this seething fire it required, first, a mining man of long experience and noted ability to conceive an effective idea as to how the fire could be halted; secondly, it required a man of ability and determination to put the idea into effect, and lastly it required a man of unlimited executive ability to marshall his forces in such a manner as to keep them all constantly working to the desired end, as the time was so limited.

The man having the above qualifications was W. A. Lathrop, President of the Lehigh Coal and Navigation Company, who with the assistance of Superintendent Baird Snyder, Jr., Assistant Superintendents W. G. Whildin, S. V. Tench and C. Straw, and Division Engineer C. T. Starr, started operations in December, 1908, and practically finished by December, 1909, the work on a clay barrier built to prevent the fire, which had been burning since February 15, 1859, in the Summit Hill basin, from getting into the Mammoth workings of the Lansford basin.

Figure 1 shows the starting point of the fire, the various drilled holes and the clay barrier. The hatched portion of Figure 1 is the area burned over from the commencement of this fire. It will be noted from Figures 1 and 3 that the fire had confined itself chiefly to the south dip of the Mammoth vein, which is on a flat pitch of about twenty-three degrees. From the workings of this vein and from the little covering over it, the ground was broken extensively over the surface.

The plan adopted was to build a solid clay pillar twelve feet wide from the anti-clinal between the main Lansford basin and the Summit Hill basin to the water level of the Summit Hill basin as shown in Figure 3; the clay barrier to extend from the surface to the bottom slate.

In order to dig this trench for the clay, a series of shafts was started as shown in Figure 3, lettered "Open Cut," "A," "B," "C," "D," "E," and "F." The open cut extended from the anti-clinal south 155 feet down the pitch toward Shaft "A." A block of ground 50 feet was left between each of these shafts down to "D." From "D" to "E" a 100-foot block was left; from "E" to "F," a 110 foot block. These first shafts were sunk and concrete walls placed in all, except "E" and "F." The shafts were 50 feet by 12 feet, except "E" and "F," which were 20 feet by 12 feet.

After this was finished, the remaining blocks, Nos. 1, 2, 3 and 4 were removed and concrete walls placed in them similar to those in

"A," "B," "C" and "D." Between "D" and "E" and "E" and "F" only the coal between them was removed and the empty vein space filled in.

The ordinary methods of sinking shafts were employed, with the exception that each shaft was equipped with a derrick as well as head frame. The idea of putting the concrete walls, which were 18 inches thick, in the shafts was to enable the removing of the buntons when the clay was put in. These walls were placed across the shaft in the centre of each compartment and extended from the bottom to the surface. The removal of the buntons was done to prevent any possibility of the fire creeping across from the east to the west side of the shaft, so that when the job was finished, there would be absolutely no combustible communication from the fire side of the shafts, which is on the east, to the coal on the west side.

The clay used in the filling of the shafts was found in the immediate vicinity of the workings, was loaded into dump-cars with steam-shovels, hauled to the top of the workings and slushed into the shafts with a series of chutes.

All large stones had been removed at the clay pits, and smaller ones removed by grate bars placed at convenient spots in the chutes, so that the clay going into the shafts was thoroughly puddled. Owing to the loose nature of the ground, a considerable amount of the clay escaped through the sides of the shafts, which naturally made the barrier wider than the estimated 12 feet, filling up the cracks and loose ground on both sides of the shafts.

In conjunction with clay barrier, a series of six inch bore holes was drilled and slushed with culm. These holes were located east of the barrier and spaced fifty feet north and south and east and west, extending from the bottom of the basin to the anti-clinal. The slushing of these holes and the filling of the shafts was simultaneous.

While this work was carried out along the lines of ordinary shaft sinking, there were conditions encountered, which made the operation one of considerable difficulty. Owing to the broken nature of the ground, it was not practical to use the regular shaft drills after the first 20 or 30 feet. From this point to the bottom only small hand drills were used. And for the same reason it was necessary at certain points in the sinking that the shaft timbers, instead of being 4½ feet from centre to centre, were spaced 2 feet. Extra difficulty in sheeting the shafts had to be overcome, and owing to the shifting nature of the ground, considerable relief timber was required. Very few dead legs or supporting timbers could be used to support the wall plates, making it necessary to hang all the wall plates from top to bottom with 1¼-inch rods. The timber used was round. 1½-inch mine plank was used for sheeting, and extra quantities of packing were required to prevent the sides from falling into the shafts.

During the progress of the work the fumes from the fire got into the shafts, making it hazardous for the workingmen, and compelling the building of quite an extensive ventilating plant to keep the shafts clear, so that the work would be pursued. In No. 1 Shaft the rocks became so heated that the dangers of blasting were considerably increased. Owing to the heat and poisonous gases coming from the fire, extreme care had to be used to prevent the men from being overcome and losing their lives. It might here be noted that no

fatalities occurred in the shafts from these unusual conditions, although as many as 700 men were constantly at work.

Also because of the loose and shifting nature of the ground, extreme care was required in blasting to prevent a shot from bringing in the ribs.

In July, when the fumes and steam came into the upper shafts, it was deemed advisable to increase the number of drill holes and slush culm to cut off this danger. Six-inch bore holes were placed 100 feet apart north and south, east and west, extending 150 feet east of the shafts. These holes were driven to the bottom rock and slushed. After this was done, the poisonous gas disappeared, but there was still evi dence that the fire was pulling hard toward the openings made by the shafts.

In removing the block of coal left between "D" and "E," "E" and "F," the methods pursued were as follows: A heading was driven along the top slate of the vein from "F" shaft to "D" shaft, extending up into the top rock and down into the coal. After this heading was finished, the coal was removed by digging out blocks 25 feet in length, extending from top to bottom. As each section was removed, a 2-foot concrete wall was placed along the ribs, holes being left in this wall, so that the clay, when run in, would go off into the loose ground on either side of the heading, as well as between the walls, practically doubling the width of the barrier.

It will be seen from the above description that the plan, as finally completed, gives a solid clay barrier 12 feet wide from surface to bottom rock, extending from the anti clinal to the south end of "D" shaft, a distance of 555 feet; and that all combustible material is replaced with clay for a distance of 260 feet south of "D" shaft, making, in connection with the slushing which was done on the fire side (thus preventing any strong fire from approaching the barrier) what will be a solid check to further progress of this fire.

CONDITION OF COLLIERIES

LEHIGH COAL AND NAVIGATION COMPANY

Colliery No. 1.—Ventilation and roads fair; drainage and general condition as to safety, good.

Colliery No. 4.—Ventilation fair; drainage and roads good.

Colliery No. 5.—Ventilation, drainage and roads good; general con dition good.

Colliery No. 6.—Ventilation and roads good; drainage fair; gen eral condition as to safety, good.

Colliery No. 8.—Ventilation and drainage fair; condition as to safety, good.

Colliery No. 9.—Ventilation and drainage fair; roads good.

Colliery No. 10.—Ventilation, drainage and roads good; condition as to safety, good.

Colliery No. 11.—Ventilation good; roads and drainage fair; general condition as to safety, good.

Colliery No. 14.—General condition good.

Washery No. 12.—In good condition.
Washery No. 15.—In good condition.

ESTATE A. S. VAN WICKLE

Coleraine.—The general condition good. The principal work is robbing.

BEDDALL BROTHERS AND COMPANY

Greenwood No. 13.—The company having completed operations in the tunnel is using the breaker as a washery for the purpose of washing the surrounding culm banks.

COXE BROTHERS AND COMPANY, INCORPORATED

Beaver Meadow.—Ventilation, drainage and roads good; general condition as to safety, good.

EVANS COLLIERY COMPANY

Beaver Meadow.—Ventilation fair; drainage good; general condition good.

MOSES NEYER

Black Rock.—Ventilation and drainage good.

HACKLEBERNIE COAL COMPANY

Hacklebernie Tunnel.—Drainage and roads fair; ventilation and general condition as to safety, good. The company suspended operations August 31, 1909.

LEHIGH VALLEY COAL COMPANY

Leviston Washery.—In good condition.

W. R. McCREADY

McCready's.—The principal work done is robbing; general condition good.

EDWARD SHEPP

Springdale Tunnel.—The principal work done is robbing; general condition good.

IMPROVEMENTS

LEHIGH COAL AND NAVIGATION COMPANY

Colliery No. 1.—Steel timbering of No. 2 shaft pump-house, 2nd level.

Tapping of water in Mammoth vein, bottom level, No. 2 shaft.

Tapping of water in Primrose vein, No. 3 slope.

Installation of electric haulage in No. 1 tunnel, and partial equipment of No. 2 shaft.

Slush trough from breaker to dumping ground to dispose of refuse.

Complete installation of new air compressor at No. 2 shaft.

Erected dam at No. 1 tunnel to catch mine water; installed electrically-driven centrifugal pump to pump water to trough line, through which it is conveyed to breaker.

New car and blacksmith shop erected.

Removed old breaker.

Tunnel from Seven-Foot vein to Buck Mountain East Plane level, 185 feet in length.

Tunnel from East Mammoth to Seven-Foot, East Tunnel workings, 110 feet in length.

New 60-gallon La France fire extinguisher.

Colliery No. 4.—Remodeling pumping plant.

New 24-foot ventilating fan constructed by the Lehigh Coal and Navigation Company.

Abandoned old breaker.

Colliery No. 5.—Remodeled No. 5 breaker.

Completed tunnel from West Primrose to Mammoth, 3rd level, 465 feet in length.

Colliery No. 6.—New 60-gallon La France mine fire-extinguisher purchased.

Tunnel from Mammoth to Primrose. West Plane level, 420 feet in length.

Colliery No. 8.– Completed new breaker, which takes the coal from Nos. 8 and 9; old breakers at those points abandoned, and No. 8 removed.

Installed one 500 horse power battery of Stirling boilers in No. 8 shaft plant.

Erected steam-line from No. 8 shaft plant to No. 8 mountain fan, and abandoned boiler plant at that point.

Installed 60-gallon La France mine fire extinguisher for Nos. 8 and 9.

Colliery No. 9.—Old breaker abandoned and partly dismantled.

Tunnel from Mammoth to Primrose. West 2nd level, 500 feet in length.

Erected fire barrier at Summit Hill mine fire operation, to prevent spread of fire westward.

Colliery No. 10.—Haulage road in Buck Mountain completed for a distance of 3,000 feet. On the 2nd level three tunnels driven from the Buck Mountain vein to the Mammoth. Top Split of Forty Foot vein connected by air tunnel to Middle Split. American La France fire engine installed.

Colliery No. 11.—Pump-house made fireproof by concreting floors in upper pumphouse and putting metallic floor in steel timber on lower pump-house; also tunnel 500 feet in length completed from the South Dip Orchard to the South Dip Mammoth vein. American La France fire engine installed.

Colliery No. 14.—Air shaft, 7 feet 6 inches x 14 feet in the clear and 437 feet deep, completed to the second level and connection made by air tunnel to Skidmore vein. Temporary 12-foot diameter Sturdevant fan installed. The North tunnel is driven to the Skidmore vein and gangways opened on the Sandrock, Primrose and Top split Mammoth. The water from the Old D slope was successfully tapped. Empty car hoist was completed during the year and a 9 x18 engine installed. Drainage system from the second and third levels to water shaft completed; also air connections made from third level to air shaft by air tunnel and air hole to Top Split of the Mammoth vein. The second opening on the north side of the shaft was completed to the surface from the second level. This will be used as an

escape-way and for intake in the winter. The second opening was completed from the South Side shaft to the surface. This is also used for an escape-way and for intake in the winter. The Orchard slope was completed to the second level. The South tunnel was driven to a point 4,070 feet south of the shaft, at which point preparations are being made to drill by diamond drillers to locate the Top Split gangway from Old Tamaqua Gap slope. This tunnel cuts the Orchard and Primrose veins. A gangway will be driven on the Primrose vein and connection made to the Orchard slope for ventilating purposes.

ESTATE A. S. VAN WICKLE

Coleraine Colliery.—A slope has been sunk at No. 7 to reach the anticlinal of the Gamma vein, 230 feet deep, angle 15 degrees, 110 feet in rock, 120 feet in coal.

No. 7 Buck Mountain Slope.—Sank a rock slope from the Gamma to the Buck Mountain vein, 245 feet, angle 28 degrees. Built a new flume, 6 feet x 8 x 900 feet long, over the No. 2 basin.

COXE BROTHERS AND COMPANY, INCORPORATED

Beaver Meadow.—Stripping operations in Greenfield and No. 8 basin have been continued. The second section of the Greenfield Stripping was completed and the third section started, 50,744 yards of rock having been removed. Total number of yards removed from the second section is 890,522. 72,455 tons of coal were mined and sent to the breaker during 1909 from those strippings. Referring to last year's report, the tunnel driven from the Wharton south, near top of Slope No. 5, has been extended to the bottom member of the Buck Mountain, 110 feet, striking the vein in fair condition, about 3 feet 6 inches thick, the total length of the tunnel being 420 feet.

The gravity plane north of No. 13 West third section was driven 257 feet and the water of the Old No. 3 slope workings successfully tapped by several hand diamond drill bore holes. This was the third tapping of the Old Beaver Meadow mines, and by it the last body of water was released.

The Wharton gangways, foot of slope No. 2 on drainage level, have been extended west. They struck a saddle about 1,600 feet west of the drainage tunnel, which was cut through, and gangways continued on drainage level. The vein on the south side is extra thick with a clear 10-foot top bench, evidently the result of pinching farther south on higher level.

The third section of the drainage tunnel was started in September and has advanced 450 feet. It will tap the Mammoth vein in Temperance basin at a distance of 1,200 feet, and will open quite a large territory of the Mammoth in virgin condition, which will very much help the production, that now largely depends on 2 foot, 6 inch and 3 foot veins, the Gamma and Buck Mountain seams.

EVANS COLLIERY COMPANY

Evans Colliery.—One head house and plane; one crusher house; two additions to washery

One lot of Retail pockets; two engine houses; two slopes in the Wharton vein and one slope in the Gamma vein; and machinery was installed for the various improvements.

EIGHTEENTH DISTRICT

SCHUYLKILL COUNTY

Pottsville, Pa., February 26, 1910.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor of transmitting herewith my annual report as Inspector of Mines of the Eighteenth Anthracite District, for the year ending December 31, 1909.

Respectfully submitted,

JOHN CURRAN,
Inspector.

SUMMARY OF STATISTICS

Number of collieries,	17
Number of mines,	39
Number of mines in operation,	39
Number of tons of coal shipped to market,	2,198,397
Number of tons used at mines for steam and heat,	338,258
Number of tons sold to local trade and used by employes,	35,723
Number of tons produced,	2,572,378
Number of tons produced by compressed air machines,	.....
Number of tons produced by electrical machines,	.....
Number of persons employed inside of mines,	4,460
Number of persons employed outside,	2,284
Number of fatal accidents inside of mines,	20
Number of fatal accidents outside,	4
Number of non-fatal accidents inside of mines,	62
Number of non-fatal accidents outside,	13
Number of tons of coal produced per fatal accident inside,	128,619
Number of persons employed per fatal accident inside,	223
Number of persons employed per fatal accident outside,	571
Number of persons employed per non-fatal accident inside,	72
Number of persons employed per non-fatal accident outside,	176
Number of wives made widows,	15
Number of children made orphans,	18
Number of steam locomotives used inside of mines,	1
Number of steam locomotives used outside,	32
Number of compressed air locomotives used inside,	6
Number of compressed air locomotives used outside,	.....
Number of electric motors used inside,	6
Number of electric motors used outside,	.....
Number of fans in use,	30
Number of furnaces in use,	.....
Number of gaseous mines in operation,	21
Number of non-gaseous mines in operation,	18
Number of new mines opened,	.....
Number of old mines abandoned,	.....

TABLE A

PRODUCTION OF COAL

Names of Operators	Tons
Mill Creek Coal Company,	579,147
Philadelphia and Reading Coal and Iron Company,	484,925
Lehigh and Wilkes-Barre Coal Company,	412,478
Coxe Brothers and Company, Incorporated,	233,005
Dodson Coal Company,	225,906
Maryd Coal Company,	207,375
Truman M. Dodson Coal Company,	196,654
Big Creek Coal Company,	90,431
Phillips Coal Company,	51,272
East Lehigh Coal Company,	45,403
Port Carbon Coal Company,	28,317
Gorman and Campion,	12,883
William Cook,	4,582
Total,	2,572,378

Production by Counties

Schuylkill,	2,572,378

TABLE B.—Fatal and non-fatal accidents inside and outside of mines; number of tons of coal produced per accident; number of persons employed; number employed per accident

Names of Operators	Fatal Accidents			Non-Fatal Accidents			Tons of coal produced per fatal accident inside	Tons of coal produced per non-fatal accident inside	Number of employes inside	Number of employes outside	Total number of employes	Number of employes inside per fatal accident	Number of employes outside per fatal accident	Number of employes inside per non-fatal accident	Number of employes outside per non-fatal accident
	Inside	Outside	Total	Inside	Outside	Total									
Mill Creek Coal Co.,	5	1	6	18	1	19	115,829	12,175	690	413	1,103	839	413	38	413
Philadelphia and Reading Coal and Iron Co.,	8	.....	8	5	.....	5	60,615	96,985	1,119	510	1,629	140	.....	224	.....
Lehigh and Wilkes-Barre Coal Co.,	1	.....	1	8	.....	8	412,478	51,559	1,103	479	1,582	1,103	.....	138	.....
Coxe Brothers and Co., Incorporated,	2	1	3	3	1	4	116,502	77,668	409	115	524	204	115	136	115
Dodson Coal Co.,	1	.....	1	5	5	10	225,906	45,181	286	217	503	286	.....	57	43
Maryd Coal Co.,	.....	1	1	8	3	11	.....	25,922	352	123	475	.....	123	44	41
Truman M. Dodson Coal Co.,	1	.....	1	10	.....	10	196,654	19,665	274	181	455	274	...	27	...
Big Creek Coal Co.,	.....	.....	.....	2	2	4	.....	45,215	54	76	130	.....	....	27	38
Phillips Coal Co.,	.....	.....	.....	1	.....	1	.....	51,272	48	53	101	.....	.....	48	.....
East Lehigh Coal Co.,	.....	.....	.....	2	1	3	.....	22,701	33	57	90	.....	.....	16	57
Port Carbon Coal Co.,	2	.....	2	.....	.....	.....	14,158	.....	58	27	85	29	.....	.....	.....
German and Campion,	.....	1	1	.....	.....	.....	.....	.....	27	27	54	.....	27	.....	.....
Miscellaneous Companies,	.....	.....	.....	.....	.....	.....	.....	.....	7	6	13	.....	.....	.....	.....
Totals and averages for district.	20	4	24	62	13	75	138,019	11,490	4,169	2,284	6,744	223	571	72	176

TABLE C.—Classification of Fatal Accidents Inside and Outside of Mines

	Months													
	January	February	March	April	May	June	July	August	September	October	November	December	Totals	Percentages
Causes of Accidents Inside														
Falls of coal,	1	1	1				2	1			1		7	35.00
Falls of slate,			1					1			1		3	15.00
Explosions of gas,			1										1	5.00
Explosions of powder and dynamite,	1												1	5.00
Blasts, premature and otherwise,	1					3				1			5	25.00
Falling into slopes, etc.,											1		1	5.00
Crushed at batteries,					1								1	5.00
Miscellaneous,	1												1	5.00
Totals,	4	1	3		1	3	2	2		1	3		20	100.00
Causes of Accidents Outside														
Cars,				1					1				2	50.00
Machinery,								1					1	25.00
Miscellaneous,							1						1	25.00
Totals,				1			1	1	1				4	100.00
Grand totals inside and outside,	4	1	3	1	1	3	3	3	1	1	3		24	

TABLE D.—Classification of Non-Fatal Accidents Inside and Outside of Mines

	Months													
	January	February	March	April	May	June	July	August	September	October	November	December	Totals	Percentages
Causes of Accidents Inside														
Falls of coal,			1				1			2		1	5	8.07
Falls of slate,			2	3			1			1		1	8	12.90
Falls of roof,											1		1	1.61
Mine cars,		1			1	2	1			1		1	7	11.29
Explosions of gas,	2	3	1		2		1	2	3				14	22.58
Explosions of powder and dynamite,		2										1	3	4.84
Blasts, premature and otherwise,	3	2	1	4		1	2						13	20.96
Falling into shafts,									1				1	1.61
Falling into slopes, etc.,			1		1			1			1	1	5	8.07
Miscellaneous,	1		1	1						1	1		5	8.07
Totals,	6	8	7	8	4	3	6	3	4	5	3	5	62	100.00
Causes of Accidents Outside														
Cars,		1				1							2	15.38
Machinery,	1		1				1						3	23.08
Miscellaneous,	1		1		1		4			1			8	61.54
Totals,	2	1	2		1	1	5			1			13	100.00
Grand totals inside and outside,	8	9	9	8	5	4	11	3	4	6	3	5	75	

TABLE E.—Occupations of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Inside													
Miners,	2	1	3	....	....	3	2	1	....	....	3	....	15
Miners' laborers,	....	....	....	....	....	....	....	1	....	1	....	....	2
Company men,	2	....	....	....	1	....	....	....	....	....	....	....	3
Totals,	4	1	3	....	1	3	2	2	....	1	3	....	20
Outside													
Loaders,	....	....	....	1	....	....	....	....	....	....	....	....	1
Laborers,	....	....	....	....	....	....	1	1	1	....	....	....	3
Totals,	....	....	....	1	....	....	1	1	1	....	....	....	4
Grand totals inside and outside,	4	1	3	1	1	3	3	3	1	1	3	....	24

TABLE F.—Occupations of Persons Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Inside													
Miners,	6	4	5	5	3	2	2	2	3	2	3	4	41
Miners' laborers,	....	3	1	2	....	....	4	....	1	1	....	....	12
Drivers and runners,	....	1	1	....	1	1	....	....	....	1	....	....	5
Doorboys and helpers,	....	....	....	....	....	....	....	....	....	1	....	....	1
Company men,	....	....	....	1	....	....	....	....	....	....	....	1	2
Fan boys,	....	....	....	....	....	....	....	1	....	....	....	....	1
Totals,	6	8	7	8	4	3	6	3	4	5	3	5	62
Outside													
Foremen,	....	....	....	....	....	....	1	....	....	....	....	....	1
Slatepickers (boys),	1	....	....	....	....	....	....	....	....	....	....	....	1
Drivers and runners,	....	1	....	....	....	....	....	....	....	....	....	....	1
Patchers,	....	....	....	....	....	1	....	....	....	....	....	....	1
Laborers,	1	....	2	....	1	....	4	....	....	1	....	....	9
Totals,	2	1	2	....	1	1	5	....	....	1	....	....	13
Grand totals inside and outside,	8	9	9	8	5	4	11	3	4	6	3	5	75

TABLE G.—Nationality of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
American,	1				1						1		3
Polish,	1			1		1							3
Italian,						2		1					3
Slavonian,							1		1		1		3
Lithuanian,	2	1	3				2	1		1	1		11
Austrian,								1					1
Totals,	4	1	3	1	1	3	3	3	1	1	3		24

TABLE H.—Nationality of Persons Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
American,	1	1			1	1	2	1	1	2		2	12
Welsh,												1	1
German,	1	1											2
Polish,	2	1	3	2		2			1	1	1		13
Hungarian,							1				1		2
Italian,		1	2										3
Slavonian,		1	1		1		4		2			2	11
Lithuanian,	2	2	3	1	3	1	4	2		3	1		22
Austrian,				1									1
Russian,	2	1		4									7
Tyrolean,		1											1
Totals,	8	9	9	8	5	4	11	3	4	6	3	5	75

TABLE I.—Operators and mines, kind of openings, type and size of fans, size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents and number of persons employed inside

Names of Operators and Mines	Kind of opening	Gaseous or non-gaseous	Method of ventilation	Diameter of fan in feet and inches	Width of blades in feet and inches	Depth of blades in feet and inches	Number of revolutions per minute	Water gauge developed—in inches	Name of fan	Power used	Number of splits of air currents	Number of cubic feet of air per minute entering the mine at inlet	Total quantity of air per minute circulating in all the splits in cubic feet	Number of cubic feet per minute passing out at outlet	Number of persons employed inside
Mill Creek Coal Co.															
Vulcan Colliery:															
Vulcan,	Slope,	Gaseous,	Fan,	25 16	8 4	6.3 4	60 65	1.8 .8	Guibal,	Steam,	15	120,500	109,850	122,650	225
Buck Mountain Colliery:															
Buck Mountain No. 1,	Slope,	Gaseous,	Fan,	18 18	4 4	4 4	85 85	.7 .9	Guibal,	Steam,	6	111,752	66,747	112,824	256
Middle Lehigh Colliery:															
Middle Lehigh No. 3,	Slope,	Gaseous,	Fan,	16	4.1	4	70	.5	Guibal,	Steam,	5	85,000	40,486	90,000	114
Middle Lehigh No. 7,	Slope,	Non-gas.	Natural,												
Philadelphia and Reading Coal and Iron Co.															
Silver Creek Colliery:															
Silver Creek,	Shaft,	Gaseous,	Fan,	21	6	7	75	1.5	Guibal,	Steam,		98,080	66,550	101,680	275
Silver Creek No. 4,	Drift,	Non-gas.	Fan,	12	4	3.6	55	.4	Guibal,	Electricity,	7	71,000	70,000	71,200	54
Silver Creek No. 2,	Drift,	Non-gas.	Natural,												
Eagle Hill Colliery Nos. 1 and 2:															
Eagle Hill No. 1,	Slope,	Gaseous,	Fan,	21	6	6.10	69	1.5	Guibal,	Steam,	4	70,610	43,100	73,160	130
Eagle Hill No. 2,	Shaft,	Gaseous,									4				
Eagle Hill No. 4,	Drift,	Non-gas.	Fan,	8	2.10	2.3	85	.6	Guibal,	Steam,	2	16,945	8,250	16,980	33
Eagle Hill No. 3,	Drift,	Non-gas.	Fan,	12	4	3.6	90	.8	Guibal,	Steam,	1	17,300	11,350	17,445	28

Eagle Hill No. 5,	Drift,	---	Non-gas.	Natural,												
Eagle Hill No. 6,	Drift,	---	Non-gas.	Natural,												
Eagle Hill No. 7,	Drift,	---	Non-gas.	Natural,												
Lehigh and Wilkes-Barre Coal Co.																
Audenried No. 4 Colliery:																
Number 11,	Slope,	---	Gaseous,	Fan,	16	4.2	3.8	95	.8	Guibal,	Steam,	5	105,000	105,000	106,000	535
Number 16,	Slope,	---	Gaseous,	Fan,	12	4	3.6	90	.7			2	49,000	49,000	51,000	
Number 21,	Slope,	---	Gaseous,	Fan,	15	4.6	5	45	.4			2	39,000	39,000	40,000	
Honey Brook No. 5 Colliery:																
Number 15,	Slope,	---	Gaseous,	Fan,	15	4.4	4.4	75	.8	Guibal,	Steam,	4	54,300	54,300	55,300	378
Number 22,	Slope,	---	Non-gas.	Natural,												
Number 20,	Slope,	---	Gaseous,	Fan,	8	2.10	2.3	65	.8	Guibal,	Steam,	3	28,800	28,800	30,800	
Green Mountain,	Slope,	---	Non-gas.	Fan,	15	4.2	4.6	65	.7	Guibal,	Steam,	4	46,450	46,450	48,450	
Water Level Tunnel,	Drift,	---	Non-gas.	Fan,	12	4	3.6	60	.5	Guibal,	Steam,	2	27,000	27,000	28,000	
Number 8,	Slope,	---	Non-gas.	Natural,												
Coxe Brothers and Co., Incorporated																
Oneida Colliery:																
Number 1,	Shaft and Slope,		Gaseous,	Fan,	12.6	5.3	5.10	150	.7	Pelzer,	Steam,	10	74,700	60,000	76,000	146
Number 3,	Shaft,	---	Gaseous,	Fan,	20	6	6.6	65	.4	Guibal,	Steam,	6	62,500	53,900	68,800	108
Number 4,	Slope,	---	Gaseous,	Fan,	20	6	5.9	85	.8	Guibal,	Steam,	5	52,000	37,700	54,200	69
Dodson Coal Co.																
Morea Colliery:																
Morea,	Slope and Shaft,	---	Gaseous,	Fan,	18	6.10	6	80	1.	Guibal,	Steam,	8	136,500	53,560	138,600	243
				Fan,	18	6.10	6	80	.9							
				Fan,	18	6.10	6	80	.5							
Maryd Coal Co.																
Maryd Colliery:																
Maryd No. 1,	Shaft,	---	Gaseous,	Fan,	16	4.2	4.9	80	1.6	Guibal,	Steam,	5	85,872	80,000	86,872	284
					18	6	5	70	1.5							
Maryd No. 1,	Slope,	---	Gaseous,	Fan,	16	4	5	80	1.75	Guibal,	Steam,	2	22,420	22,000	23,440	37
Maryd No. 1,	Drift,	---	Non-gas.	Natural,												37
Truman M. Dodson Coal Co.																
Kaska William Colliery:																
Kaska William,	Shaft,	---	Gaseous,	Fan,	16	4	5	65	.6	Guibal	Steam,	6	82,970	65,500	84,850	274
				Fan,	22	6	5.10	68	1.1							
Big Creek Coal Co.																
Moss Glenn Colliery:																
Moss Glenn,	Slope,	---	Non-gas.	Fan,	10	3	3	100	1.5	Guibal,	Steam,	2	20,000	7,500	20,000	50
Phillips Coal Co.																
Silver Hill Colliery:																
Silver Hill,	Drift,	---	Non-gas.	Natural,												48

TABLE I—Continued

Names of Operators and Mines	Kind of opening	Gaseous or non-Gaseous	Method of ventilation	Diameter of fan in feet and inches	Width of blades in feet and inches	Depth of blades in feet and inches	Number of revolutions per minute	Water gauge developed—in inches	Name of fan	Power used	Number of splits of air currents	Number of cubic feet of air per minute entering the mine at inlet	Total quantity of air per minute circulating in all the splits in cubic feet	Number of cubic feet per minute passing out at outlet	Number of persons employed inside
East Lehigh Coal Co.															
East Lehigh Colliery:															
East Lehigh,	Slope and Drift,	Gaseous,	Fan,	12	4	3.6	70	.5	Guibal,	Steam,	2	15,500	11,500	16,000	32
Port Carbon Coal Co.															
Lucy C. R. Colliery:															
Lucy C. R.,	Drift,	Non-gas.	Fan,	9.6	3	3	200	.5	Guibal,	Steam,	3	12,500	12,000	13,000	58
Gorman and Campion															
Bell Colliery:															
Bell,	Drift,	Non-gas.	Natural,												27
William Cook															
Oakley Colliery:															
Oakley,	Slope,	Non-gas.	Natural,												7

TABLE 1.—Operators, location of collieries, railroads, etc.

Names of Operators and Collieries	County	Name of General Superintendent	Post Office	Name of Superintendent	Post Office	Railroad to Mine
Mill Creek Coal Co. Vulcan, Buck Mountain, Middle Lehigh,	Schuylkill,	T. D. Jones,	New Boston,	J. F. Jones,	New Boston,	Lehigh Valley and P. and R.
Philadelphia and Reading Coal and Iron Co. Silver Creek, Eagle Hill No. 1, Eagle Hill No. 2,	Schuylkill,	W. J. Richards, General Manager,	Pottsville,	Reese Tasker, Mining Supt., George B. Hadesty, Division Supt., Thomas Beddow, District Supt., W. Tiley, Outside Supt.,	Pottsville,	Philadelphia and Reading
Lehigh and Wilkes-Barre Coal Co. Audenried, No. 4, Honey Brook No. 5,	Schuylkill,	Charles T. Huber,	Wilkes-Barre,	Edward J. Newbaker,	Audenried,	C. R. R. of N. J.
Coxe Brothers and Co., Incorporated Oneida,	Schuylkill,	S. D. Warriner, General Manager,	Wilkes-Barre,	William H. Davies,	Hazleton,	Lehigh Valley
Dodson Coal Co. Morea,	Schuylkill,	Thomas M. Dodson,	Morea,	T. F. Downing,	Pottsville,	Penna. and Lehigh Valley
Maryd Coal Co. Maryd,	Schuylkill,	T. E. Snyder,	Hazleton,	Arthur Kennedy,	Maryd,	P. and R. and C. R. R. of N. J.
Truman M. Dodson Coal Co. Kaska William	Schuylkill,	Thomas M. Dodson,	Morea,	T. F. Downing,	Pottsville,	Philadelphia and Reading
Big Creek Coal Co. Moss Glenn,	Schuylkill,			Frederick John,	Brockton,	Philadelphia and Reading

TABLE 1—Continued

Names of Operators and Collieries	County	Name of General Superintendent	Post Office	Name of Superintendent	Post Office	Railroad to Mine
Phillips Coal Co. Silver Hill,	Schuylkill,	David E. Phillips,	Middleport,	David E. Phillips,	Middleport,	Philadelphia and Reading
East Lehigh Coal Co. East Lehigh,	Schuylkill,	James Tinley,	Tamaqua,	James Tinley,	Tamaqua,	Philadelphia and Reading
Port Carbon Coal Co. Lucy C. R.,	Schuylkill,	D. J. Slattery,	Port Carbon,	D. J. Slattery,	Port Carbon,	Philadelphia and Reading
Gorman and Campion Bell,	Schuylkill,	D. J. Slattery,	Tuscarora,	D. J. Slattery,	Tuscarora,	Philadelphia and Reading
William Cook Oakley,	Schuylkill,	William Cook,	Tuscarora,	William Cook,	Tuscarora,	Philadelphia and Reading

TABLE 2.—Number of tons of coal mined, number of days worked, number of persons employed, number killed and injured, quantity of powder, dynamite and so-called safety explosives used, etc.

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Explosives: Number of pounds of powder used	Explosives: Number of pounds of dynamite used	Explosives: Number of pounds of so-called safety explosives used	Number of horses and mules
Mill Creek Coal Co.													
Vulcan,	Schuylkill,	210,163	21,769	.....	231,932	222	406	2	11	166,250	15,250	.....	45
Buck Mountain,		198,466	26,470	.....	224,936	213	397	1	5	142,000	17,150	.....	42
Middle Lehigh,		107,468	14,811	.....	122,279	179	300	3	3	53,750	21,575	.....	35
Totals,		516,097	63,050	.....	579,147	.....	1,103	6	19	362,000	53,975	.....	122
Philadelphia and Reading Coal and Iron Co.													
Silver Creek,	Schuylkill,	244,914	29,168	4,001	278,083	212	933	5	7	95,750	78,235	19,642	88
Eagle Hill No. 1,		170,143	28,960	2,018	201,121	216	550	3	....	18,125	12,863	33,882	48
Eagle Hill No. 2,		.....	5,721	.....	5,721	.....	146	....	....	25,275	28,815	2,607	6
Totals,		415,057	63,849	6,019	484,925	.....	1,629	8	7	139,150	119,913	61,131	142
Lehigh and Wilkes Barre Coal Co.													
Audenried No. 4,	Schuylkill,	234,793	47,098	2,082	283,973	161	797	1	6	90,550	131,800	.....	20
Honey Brook No. 5,		114,177	14,328	.....	128,505	98	695	....	2	43,000	85,825	.....	19
		.....	.....	.....	.....	.....	*90	....	....	.....	.....	.....	.....
Totals,		348,970	61,426	2,082	412,478	.....	1,582	1	8	133,550	217,625	.....	39

*Miscellaneous.

TABLE 2—Continued

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Explosives			Number of horses and mules
										Number of pounds of powder used	Number of pounds of dynamite used	Number of pounds of so-called safety explosives used	
Coxe Brothers and Co., Incorporated													
Oneida,	Schuylkill,	161,998	55,709	15,298	233,005	184	524	3	4	96,700	97,185	.....	69
Dodson Coal Co.													
Morea,	Schuylkill,	199,918	25,000	988	225,906	251	503	1	8	88,750	69,725	.....	44
Maryd Coal Co.													
Maryd,	Schuylkill,	187,074	19,392	909	207,375	182	475	1	11	85,975	48,667	.....	47
Truman M. Dodson Coal Co.													
Kaska William,	Schuylkill,	159,819	36,500	335	196,654	239	455	1	10	52,500	28,125	.....	40
Big Creek Coal Co.													
Moss Glenn,	Schuylkill,	86,975	2,643	813	90,431	298	130	....	4	1,000	3,500	1,500	2
Phillips Coal Co.													
Silver Hill,	Schuylkill,	48,087	2,332	853	51,272	263	101	....	1	.....	7,200	.....	8
East Lehigh Coal Co.													
East Lehigh,	Schuylkill,	32,431	6,000	6,972	45,403	202	90	....	3	100	7,225	.....	16
Port Carbon Coal Co.													
Lucy C. R.,	Schuylkill,	26,452	1,080	785	28,317	209	85	2	....	1,250	15,000	.....	5

Gorman and Campion Bell,	Schuylkill,	12,083	800	.....	12,883	147	54	1	.....	.....	6,000	.....	12
William Cook Oakley,	Schuylkill,	3,436	477	669	4,582	191	13	.....	.....	.....	825	.....	4
Grand totals,	.....	2,198,397	338,258	35,723	2,572,378	.....	6,744	24	75	960,975	674,965	62,631	550

TABLE 2. Part 2.

Names of Operators	County	Number of Boilers					Locomotives			Number of steam engines of all classes	Total horse power	Number of pumps delivering water to surface	Capacity in gallons per minute	Quantity delivered to surface per minute—gallons	Number of electric dynamos	Number of air compressors
		Cylindrical	Horse power	Tubular	Horse power	Total horse power	Steam	Air	Electric							
Mill Creek Coal Co.,	Schuylkill,	52	2,960	25	4,050	7,010	10	3	------	47	4,745	14	16,400	3,500	----	2
Philadelphia and Reading Coal and Iron Co.,		20	600	22	3,050	3,650	3	1	------	35	7,875	4	2,447	1,020	----	3
Lehigh and Wilkes-Barre Coal Co.,		39	1,350	45	4,780	6,130	8	------	1	46	6,075	11	17,263	8,045	2	2
Coxe Brothers and Co., Incorporated,		3	90	25	3,200	3,290	4	2	------	34	3,000	7	5,920	3,570	1	4
Dodson Coal Co.,		----	----------	21	2,550	2,550	------	------	4	14	1,200	5	6,853	6,853	1	1
Maryd Coal Co.,		----	----------	12	1,700	1,700	2	------	------	18	2,200	4	2,100	1,000	----	1
Truman M. Dodson Coal Co.,		----	----------	16	2,240	2,240	1	------	------	14	2,615	2	2,350	1,500	----	2
Big Creek Coal Co.,		3	120	4	350	470	2	------	------	10	253	3	540	540	----	----
Phillips Coal Co.,		----	----------	6	430	430	2	------	------	6	250	----	----------	----------	----	----
East Lehigh Coal Co.,		----	----------	3	650	650	------	------	------	10	567	1	300	150	----	----
Port Carbon Coal Co.,		----	----------	2	175	175	------	------	1	3	175	----	----------	----------	1	1
Gorman and Campion,		----	----------	2	200	200	------	------	------	6	150	----	----------	----------	----	1
William Cook,		----	----------	2	120	120	1	------	------	3	176	----	----------	----------	----	----
Totals,		117	5,120	185	23,495	28,615	33	6	6	246	29,281	51	54,173	26,178	5	17

TABLE 3.—Number of each class of employes inside and outside of mines

Names of Operators	County	Inside											Outside									Grand total inside and outside
		Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Doorboys and helpers	Pumpmen	Company men	All other employes	Total inside	Superintendents	Foremen	Blacksmiths and carpenters	Engineers and firemen	Slate pickers (boys)	Slate pickers (men)	Bookkeepers and clerks	All other employes	Total outside	
Mill Creek Coal Co.,	Schuylkill,	3	2	10	333	146	76	18	6	51	45	690	1	3	21	80	49	60	7	192	413	1,103
Philadelphia and Reading Coal and Iron Co.,		2	7	11	388	240	64	5	6	137	259	1,119	----	5	27	54	73	28	8	315	510	1,629
Lehigh and Wilkes-Barre Coal Co.,		3	2	4	350	243	53	27	11	220	190	1,103	3	7	28	60	119	15	4	243	479	1,582
Coxe Brothers and Co., Incorporated,		1	5	----	219	32	36	14	4	17	81	409	----	1	12	38	------	------	4	60	115	524
Dodson Coal Co.,		1	----	3	87	62	16	3	6	65	43	286	1	1	18	32	39	14	3	109	217	503
Maryd Coal Co.,		1	1	5	189	71	22	1	3	28	31	352	1	2	9	19	14	------	5	73	123	475
Truman M. Dodson Coal Co.,		1	----	5	88	58	29	1	6	57	29	274	1	1	12	33	54	11	2	67	181	455
Big Creek Coal Co.,		1	1	----	45	1	------	------	2	4	------	54	1	3	3	8	8	------	1	52	76	130
Phillips Coal Co.,		1	----	----	13	10	4	2	------	18	------	48	1	1	2	8	8	1	1	31	53	101
East Lehigh Coal Co.,		1	----	----	16	5	4	------	1	6	------	33	1	1	3	5	8	------	1	38	57	90
Port Carbon Coal Co.,		1	----	1	34	10	4	2	------	6	------	58	1	1	2	3	5	------	1	14	27	85
Gorman and Campion,		1	----	----	17	------	3	1	------	------	5	27	1	1	2	5	5	1	------	12	27	54
William Cook,		1	----	----	3	1	1	------	------	------	1	7	----	1	----	1	2	------	------	2	6	13
Totals,	----------	13	18	39	1,782	879	312	74	45	609	684	4,460	12	28	139	346	384	130	37	1,208	2,284	6,744

TABLE 3.—Part 2

Names of Operators	County	Average Number of Days Worked in Breaker												
		January	February	March	April	May	June	July	August	September	October	November	December	Total
Mill Creek Coal Co.,	Schuylkill,	19	18	21	16	17	18	15	18	13	19	17	14	205
Philadelphia and Reading Coal and Iron Co.,		20	16	26	22	16	14	8	13	15	20	22	22	214
Lehigh and Wilkes-Barre Coal Co.,		15	13	13	20	7	9	5	6	7	10	12	12	129
Coxe Brothers and Co., Incorporated,		21	14	13	17	16	16	16	8	8	12	24	19	184
Dodson Coal Co.,		21	22	26	23	24	26	24	23	15	6	23	18	251
Maryd Coal Co.,		-----	27	22	21	12	14	13	13	13	15	16	16	182
Truman M. Dodson Coal Co.,		20	20	25	20	23	24	20	18	18	17	16	18	239
Big Creek Coal Co.,		25	23	27	23	24	25	25	26	25	25	25	25	298
Phillips Coal Co.,		25	19	27	24	20	15	23	15	22	25	24	24	263
East Lehigh Coal Co.,		15	17	26	21	23	13	22	7	-----	9	24	25	202
Port Carbon Coal Co.,		20	18	23	11	15	13	13	14	16	22	18	23	209
Gorman and Campion,		8	15	15	19	13	13	11	9	11	17	13	3	147
William Cook,		22	18	27	21	10	9	11	14	14	12	15	18	191

TABLE 4.—Fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Colliery	County	Nature and Cause of Accident in Brief
Jan. 2	Frank Narrowsavage,	Lithuanian,	Miner,	50	M.	1	....	Silver Creek,		Fatally injured by blast at face of chute.
13	Joseph Miser,	Lithuanian,	Company man,	32	S.	....	....	Middle Lehigh,		Fatally injured by an explosion of dynamite.
18	Frank Ninitz,	Polish,	Miner,	25	M.	1	1	Middle Lehigh,		Killed by fall of coal in stump heading.
19	Albert Bachman,	American,	Company man,	22	M.	1	1	Audenried No. 4,		Fatally injured by being struck by a piece of coal on bottom of slope.
Feb. 23	Anthony Pritonis,	Lithuanian,	Miner,	42	M.	1	....	Eagle Hill No. 1,		Fatally injured by fall of coal at face of breast.
March 19	George Shopella,	Lithuanian,	Miner,	39	M.	1	1	Silver Creek,		Killed by fall of coal at face of breast.
23	Mike Krousles,	Lithuanian,	Miner,	39	M.	1	....	Silver Creek,		Fatally injured by explosion of gas at face of breast.
26	Joseph Cominsky,	Lithuanian,	Miner,	45	M.	1	5	Kaska William,	Schuylkill,	Fatally injured by fall of slate while robbing back breast pillars.
April 23	Albert Viader,	Polish,	Car-loader,	43	M.	1	4	Oneida,		Killed by falling under gondola car under breaker. Outside.
May 12	James Gallagher,	American,	Company man,	40	S.	....	....	Silver Creek,		Killed. Smothered by a rush of coal from batteries.
June 3	Albert Leese,	Polish,	Miner,	30	M.	1	....	Vulcan,		Killed by blast at face of breast.
27	Thomas Macalouse,	Italian,	Miner,	23	S.	....	....	Oneida No. 1,		Killed by blast at face of tunnel.
	Antonie Ceritelle,	Italian,	Miner,	28	S.	....	....			
July 9	John Wasalosky,	Lithuanian,	Miner,	28	M.	1	....	Eagle Hill No. 1,		Killed by fall of coal at face of breast.
	George Puslis,	Lithuanian,	Miner,	32	M.	1	....			
24	Joseph Latten,	Slavonian,	Laborer,	35	M.	1	....	Bell,		Fatally injured. While putting a boiler on a railroad car, the rope broke and the boiler rolled back on him. Outside.
Aug. 4	Ralph Stanilso,	Italian,	Laborer,	57	M.	1	....	Middle Lehigh,		Killed by being pulled into the scraper line while dumping a barrow of coal into conveyors. Outside.

TABLE 4—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Colliery	County	Nature and Cause of Accident in Brief
Aug. 23	Evan Gerawatize,	Austrian,	Miner,	23	S.			Buck Mountain,		Fatally injured by fall of slate at face of breast.
25	William Kamininsky,	Lithuanian,	Laborer,	23	S.			Morea,		Killed by fall of coal at face of gangway.
Sept. 14	Martin Rozets,	Slavonian,	Laborer,	60	S.			Maryd,		Fatally injured by mine cars at foot of dirt plane. Outside.
Oct. 5	Stiney Gertoff,	Lithuanian,	Laborer,	23	S.			Vulcan,	Schuylkill,	Fatally injured by premature blast of dynamite while robbing pillars.
Nov. 5	John Nimits,	Slavonian,	Miner,	29	M.	1	3	Silver Creek,		Fatally injured by fall of top slate at face of breast.
8	George Ambrose,	Lithuanian,	Miner,	37	S.			Lucy C. R.,		Killed. He fell down chute and was smothered by a rush of coal from batteries.
13	William Young,	American,	Miner,	35	M.	1	3	Lucy C. R.,		Killed by fall of coal at face of breast.

TABLE 5.—Non-fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Colliery	County	Nature and Cause of Accident in Brief
Jan. 1	Michael Poliska,	Polish,	Slatepicker,	18	S.	Morea,		Arm fractured by falling from platform in breaker. Outside.
12	Anthony Rembolt,	German,	Laborer,	16	S.	East Lehigh,		Head cut. He fell into scraper line and was dragged. Outside.
	Joseph Stefonsky,	Polish,	Miner,	30	S.	Honey Brook No. 5,		Hands and face cut. Dynamite exploded while he was charging a hole in breast.
	John Berchinsky,	Russian,	Miner,	32	M.	Audenried No. 4,		Concussion of brain and face and hands cut by blast at face of breast.
	John Durish,	Lithuanian,	Miner,	35	M.	Morea,		Hands and face burned by explosion of gas at face of breast.
	Raltunis Tomashufsky,	Lithuanian,	Miner,	34	S.			
16	John Chubskinsie,	Russian,	Miner,	42	M.	East Lehigh,		Leg bruised. Caught between rib of chute and check board.
26	David R. Davis,	American,	Miner,	38	M.	Maryd,		Head cut and rib broken by blast at face of breast.
Feb. 3	Joseph Polosky,	Lithuanian,	Miner,	27	S.	Vulcan,		Hands burned by explosion of gas at face of breast.
	Joseph Stencavage,	Lithuanian,	Miner,	51	M.			
4	Nicholas Torish,	Russian,	Miner,	30	S.	Buck Mountain,	Schuylkill,	Head and body burned by premature blast in No. 3 East Bottom Split gangway.
	Harry Erbin,	American,	Car-runner,	19	S.	Middle Lehigh,		Body Squeezed. Caught between mine car and side of building. Outside.
8	Stiney Saluasky,	Polish,	Miner,	26	S.	Vulcan,		Foot cut. Struck by coal from blast at face of breast while sitting in heading.
	Victor Pomorallie,	Tyrolean,	Laborer,	25	S.	Audenried No. 4,		Head and face cut and eye injured by explosion of dynamite in sinking No. 23 slope.
	Joseph Marco,	Italian,	Laborer,	28	M.			
	Thomas Jefferson,	German,	Driver,	38	M.	Morea,		Leg broken by mine cars at bottom of slope.
11	John Pinchock,	Pavonian,	Laborer,	20	S.	Audenried No. 4,		Face and hands burned by explosion of gas in abandoned breast.

TABLE 5—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Colliery	County	Nature and Cause of Accident in Brief
March 4	George Moloufsky,	Polish,	Laborer,	20	S.	Vulcan,		Shoulder dislocated. He fell down empty breast while attempting to cross it at face.
6	Joseph Cameil,	Italian,	Laborer,	30	S.	Morea,		Face and hands burned by powder on stripping. Outside.
8	Joseph Pasquale,	Italian,	Laborer,	31	S.	Maryd,		Arm contused. Caught in conveyor line. Outside.
9	Paul Zarzinsky,	Polish,	Miner,	40	S.	Vulcan,		Back and legs injured by fall of coal at face of breast.
10	John Stefanko,	Slavonian,	Miner,	40	S.	Maryd,		Face cut by blast. He returned to see why shot had missed fire.
18	Michael Mart,	Lithuanian,	Miner,	45	M.	Moss Glenn,		Back injured by fall of slate at face of breast.
23	Frank Albush,	Lithuanian,	Miner,	27	S.	Silver Creek,		Face burned by explosion of gas at face of breast.
29	Peter Zencofskie,	Lithuanian,	Miner,	37	M.	Silver Creek,	Schuylkill,	Leg broken by fall of slate at face of breast.
30	Paul Crinchen,	Polish,	Driver,	19	S.	Middle Lehigh,		Skull fractured. He was found on gangway. Cause of accident unknown.
April 2	John Sulla,	Lithuanian,	Miner,	45	M.	Buck Mountain,		Leg fractured by fall of slate in breast.
5	Eian Beitravage,	Austrian,	Miner,	27	S.	Vulcan,		Toes cut off by fall of slate at face of gangway.
6	Steve Nipewada,	Russian,	Miner,	30	M.			Arm fractured by blast, caused by drilling out a hole that had missed fire.
	John Butchko,	Russian,	Laborer,	35	S.	Buck Mountain,		Eye destroyed and body cut by blast, caused by drilling out a hole that had missed fire.
	Steve Wishinsky,	Russian,	Laborer,	25	S.			Hips bruised, caused by drilling out hole that had missed fire.

April	7	John Krabuski,	Polish,	Company man,	21	S.	Audenried No. 4,			Contusion of the pelvis and injured internally. Struck by piece of coal that rolled down the slope.
	19	John Stefnosky,	Russian,	Miner,	26	M.	Honey Brook No. 5,			Head and face cut and eyes injured by blast. He returned to a blast before it had time to explode.
		Andrew Coslosky,	Polish,	Miner,	23	M.	Kaska William,			Leg broken by fall of slate at face of gangway.
May	3	John Stawshock,	Lithuanian,	Miner,	26	S.	Kaska William,			Body bruised by falling down manway of breast.
		John Mitchel,	Slavonian,	Laborer,	19	S.	Maryd,			Head injured. Struck by piece of coal that fell from derailed car on top of slope. Outside.
	8	Simon Poloskey,	Lithuanian,	Miner,	36	M.	Vulcan,			Hands and face burned by gas. He unscrewed the bottom from his safety lamp to light a squib and ignited the gas.
	10	Paul Birch,	Lithuanian,	Miner,	40	S.	Vulcan,			Hands and face burned by gas. He ignited gas liberated by a shot in an adjoining breast.
	12	Joseph Bonenberger,	American,	Driver,	22	S.	Maryd,			Hips squeezed. Caught between mine car and door on gangway.
June	3	Paul Serea,	Polish,	Miner,	33	S.	Vulcan,			Right hip broken. Caught between door frame on gangway and loaded trip of mine cars.
		Milton Mace,	American,	Driver,	23	M.	East Lehigh,			Body squeezed. Fell under mine car while in motion.
	11	Andrew Bentofsky,	Lithuanian,	Miner,	38	S.	Kaska William,		Schuylkill,	Leg injured and body cut by blast. He went into a blank heading for safety from blast he was firing in his own breast and the miner in next breast fired a shot which blew through into the heading in which he was sitting. Leg had to be amputated.
	21	Peter Ondex,	Polish,	Patcher,	19	S.	Moss Glenn,			Foot injured. Caught between locomotive and mine cars. Outside.
July	1	William Elger,	Lithuanian,	Miner,	40	M.	Vulcan,			Back injured. A piece of top coal fell on him at face of chute in pillar.
	6	Michael Vanick,	Slavonian,	Laborer,	35	M.	Maryd,			Skull fractured. Struck by piece of rock in rock chute. Outside.
	8	Alonzo Clace,	Hungarian,	Laborer,	51	M.	Oneida,			Ribs fractured. Fell under mine car while it was being hoisted out of No. 18 East Buck Mountain gangway.
	9	Robert Gengler,	Lithuanian,	Laborer,	27	M.	Silver Creek,			Leg broken by fall of slate at face of gangway.
	15	Alex. Osteravage,	Lithuanian,	Laborer,	28	S.	Silver Creek,			Head and body cut and arms bruised by blast in tunnel between Skidmore and Mammoth veins, No. 4 plane.

TABLE 5—Continued.

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Colliery	County	Nature and Cause of Accident in Brief
July 15	Stiney Gule,	Lithuanian,	Laborer,	20	S.	Silver Creek,		Face burned by powder and body bruised by blast in tunnel between Skidmore and Mammoth veins, No. 4 plane.
21	John Pretco,	Slavonian,	Laborer,	33	M.	Morea,		Arm lacerated and burned by blast on stripping. Outside.
	George Dilebo,	Slavonian,	Laborer,	20	S.	Morea,		Face burned and eyes injured by blast on stripping. Outside.
	Andrew Terrace,	Slavonian,	Laborer,	29	M.	Morea,		Face burned and eyes injured by blast on stripping. Outside.
23	Jerome McNelis,	American,-	Miner,	28	S.	Maryd,		Face and hands burned by gas.
27	Harry Matz,	American,-	Breaker-foreman,	21	S.	Moss Glenn,		Arm, jaw and nose broken and neck cut. Caught by rope socket and dragged into pulley while in motion. Outside.
Aug. 20	Matthew Mutalavage,	Lithuanian,	Miner,	38	M.	Kaska William	Schuylkill,	Hand and face burned by gas.
	Frank McFadden,	American,-	Fan-boy,	19	S.			
26	Andrew Laska,	Lithuanian,	Miner,	30	S.	Kaska William,		Scalp torn from head. Fell down manway of breast.
Sept. 17	Walter Pusaculski,	Polish,	Miner,	23	S.	Silver Creek,		Hands and face burned by gas in breast heading.
19	Nicholas Kline,	American,-	Laborer,	25	S.	Kaska William,		Ribs broken and face cut by falling down air shaft.
22	Paul Gerish,	Slavonian,	Miner,	41	M.	Maryd,		Hands and face burned by gas.
	Paul Aselovish,	Slavonian,	Miner,	50	S.			
Oct. 6	Jake Soboskey,	Lithuanian,	Miner,	31	M.	Kaska William,		Leg broken by fall of slate on gangway that he was repairing.
	Joseph Brown,	American,-	Door-tender,	60	M.	Vulcan,		Shoulder dislocated by slipping on rail.
	William Yenones,	Lithuanian,	Miner,	50	M.	Kaska William,		Hips crushed and pelvis injured by fall of coal at face of breast.

Oct	11	Joseph Ocavage,	Lithuanian,	Laborer,	29	M.	Kaska William,			Leg broken. A piece of coal fell on him at face of gangway.
	12	Jake Sombroski,	Polish,	Driver,	22	S.	Middle Lehigh,			Leg bruised. Caught between mine cars on gangway.
	28	Isaac Van Blaragan,	American,	Laborer,	50	M.	Oneida,			Ribs broken. Fell from wagon while unloading machinery. Outside.
Nov.	1	John Zebyock,	Lithuanian,	Miner,	41	M.	Moss Glenn,			Legs broken by a piece of rock that fell on him from roof at face of breast.
	23	John Welshock,	Hungarian,	Miner,	35	M.	Oneida,			Head cut by falling down manway.
	25	Ballis Sepinsky,	Polish,	Miner,	36	M.	Audenried No. 4,			Concussion of brain. Struck by prop and knocked down manway.
Dec.	7	John Wolfe,	American,	Miner,	44	M.	Oneida,	Schuylkill,		Leg broken by fall of coal at face of breast.
	8	William Jones,	Welsh,	Company man,	27	M.	Silver Hill,			Compound fracture of leg. Struck by mine car on top of inside slope.
	15	Michael Killofsky,	Slavonian,	Miner,	36	M.	Maryd,			Thigh broken by fall of slate while robbing pillars in West Bottom Split vein, No. 1 drift.
	17	Charles Dillon,	American,	Miner,	25	M	Maryd,			Head and body burned by explosion of powder.
	23	Thomas Dobis,	Slavonian,	Miner,	40	M.	Silver Creek,			Head cut and ribs broken by falling down manway of breast.

CONDITION OF COLLIERIES

MILL CREEK COAL COMPANY

Vulcan.—Ventilation fair; condition as to safety good; drainage poor.

Buck Mountain.—Ventilation fair; condition as to safety good; drainage poor.

Middle Lehigh.—Ventilation fair; condition as to safety good; drainage fair.

PHILADELPHIA AND READING COAL AND IRON COMPANY

Silver Creek.—Shaft workings. Ventilation good; condition as to safety, good; drainage good.

Drifts Nos. 2 and 4.—Ventilation good; condition as to safety, good; drainage good.

Eagle Hill—No. 1 Slope.—Ventilation good; condition as to safety, good; drainage good.

No. 2 Shaft.—Ventilation good; condition as to safety, good; drainage good.

Nos. 3, 4, 5, 6 and 7 Drifts.—Ventilation good; condition as to safety, good; drainage good.

LEHIGH AND WILKES-BARRE COAL COMPANY

Audenried No. 4.—Nos. 11, 16 and 21 Slopes.—Ventilation good; condition as to safety, good; drainage good.

Honey Brook No. 5—Nos. 15, 22, 20, 8 and Green Mountain Slopes. —Ventilation fair; condition as to safety, good; drainage good.

Water Level Drift.—Ventilation good; condition as to safety, good; drainage good.

COXE BROTHERS AND COMPANY, INCORPORATED

Oneida—Nos. 1, 3 and 4 Slopes.—Ventilation good; condition as to safety, good; drainage good.

DODSON COAL COMPANY

Morea—Shaft and Slope.—Ventilation fair; condition as to safety, good; drainage fair.

MARYD COAL COMPANY

Maryd—No. 1 Shaft, No. 1 Slope and No. 1 Drift.—Ventilation fair; condition as to safety, good; drainage fair.

TRUMAN M. DODSON COAL COMPANY

Kaska William.—Ventilation fair; condition as to safety good; drainage fair.

BIG CREEK COAL COMPANY

Moss Glenn.—Ventilation fair; condition as to safety good; drainage fair.

PHILLIPS COAL COMPANY

Silver Hill.—Ventilation fair; condition as to safety good; drainage fair.

EAST LEHIGH COAL COMPANY

East Lehigh.—Ventilation fair; condition as to safety, good; drainage fair.

PORT CARBON COAL COMPANY

Lucy C. R.—Ventilation fair; condition as to safety good; drainage fair.

GORMAN AND CAMPION

Bell.—Ventilation fair; condition as to safety good; drainage fair.

WILLIAM COOK

Oakley.—Ventilation fair; condition as to safety good; drainage fair.

IMPROVEMENTS

MILL CREEK COAL COMPANY

Buck Mountain Colliery.—A slope was sunk from the Sixth level, West, Buck Mountain vein, a distance of 220 feet in fault.

A new slope was sunk a distance of 518 feet in the Skidmore vein along the barrier pillar in the basin.

Seven thousand six hundred and fifty-four feet of gangway driven during the year.

Vulcan Colliery.—9,128 feet of gangway driven during the year.

Middle Lehigh Colliery.—A tunnel was driven from the Second West Seven Foot vein, south dip, to the basin of the Skidmore vein, a distance of 87 feet.

A tunnel was also driven from the Second West Seven Foot vein to Buck Mountain vein, south dip, a distance of 70 feet.

A new stripping was commenced on the north dip of the Buck mountain vein to the east.

Eleven thousand three hundred and twenty-eight feet of gangway were driven during the year.

PHILADELPHIA AND READING COAL AND IRON COMPANY

Eagle Hill Colliery No. 1—Diamond Drift.—A tunnel was driven from Diamond vein at Breast No. 30 to the Little Diamond vein; length 70 feet.

A tunnel was driven in the Little Orchard drift from the Little Orchard vein through an inversion to the same vein; Length 560 feet.

A tunnel is being driven in the North Dip Primrose drift, from the North Dip Orchard vein to the South Dip Orchard vein. The Diamond and Little Diamond veins, north, and the Little Diamond vein, south dip, have already been cut.

A drift has been opened in the south dip of the Little Diamond vein and a tunnel driven north for fourteen yards to the Diamond vein, and also a tunnel driven south twenty-one yards to the Little Diamond vein, north dip.

A slope was sunk on the Diamond vein one lift below water level and about 60 feet below old gangway from the Beddall and Robertson slope; depth 328 feet, single track slope, 8 foot collar, 10 foot legs.

A tunnel was driven from the face of the West Skidmore vein gangway, 5th level, to north dip of the Top Split of the Mammoth vein; length 150 feet.

A 12¾ x 15-inch Flory engine, with a frame engine house, has been erected at the Diamond vein slope.

An eight-foot fan, belt connected to a seven-inch engine, with a frame house, has been erected at the Diamond vein slope airway.

A 12 x 14-inch engine, with a frame house, has been erected to run the fans for the North Dip Primrose vein drift, the South Dip Primrose vein drift, and the Diamond drift.

Eagle Hill Colliery No. 2.—An air tunnel, 126 yards long, has been driven from the East Skidmore vein, stump heading at No. 15 chute, to the Buck Mountain vein.

A haulage tunnel, 243 yards long, has been driven from the West Skidmore vein gangway, at No. 18 chute, to the Holmes vein, cutting the Mammoth vein in two splits.

Silver Creek Colliery.—The tunnel from the Top Split of the Mammoth vein to the Orchard vein, south dip, on the No. 4 plane level, has been extended 179 feet to the Orchard vein, north dip.

An air hole has been driven in the North Dip Orchard vein from the No. 4 plane level to the surface, a distance of 365 feet.

A 21-foot exhaust fan is being erected on above air hole.

The air tunnel from the Skidmore vein to the Primrose vein No. 4 plane level has been extended 700 feet to the Orchard vein, north dip.

The No. 4 drift tunnel from the Orchard vein to the top split of the Mammoth vein has been extended 500 feet to the Buck Mountain vein.

A hole has been driven from the No. 2 drift, Buck Mountain vein, opposite No. 30 chute to the Seven Foot vein; length 130 feet.

A hole has been driven to the surface at No. 10 chute, East Top Split of the Mammoth vein gangway, to load the culm from the old Ledger Vein Colliery banks.

A tunnel has been driven from the Seven Foot vein, No. 3 drift, at No. 10 chute, 50 feet to the Skidmore vein.

A tunnel is being driven from the West Skidmore vein gangway, No. 4 plane level at No. 25 chute, to the Top Split of the Mammoth vein; length 210 feet.

A tunnel is being driven from the East Skidmore vein gangway, No. 4 plane level at No. 10 chute, to the Seven Foot vein; length 110 feet.

A tunnel is being driven on No. 4 plane level from the East Middle Split of the Mammoth vein gangway, at No. 33 chute, to the top split of the Mammoth vein; length 50 feet.

The No. 3 plane level tunnel from the Top Split of the Mammoth vein to the South Dip of the Primrose vein has been driven 200 feet to the North Dip of the Primrose vein.

An eight-inch diameter bore hole has been drilled from the surface to No. 4 plane level tunnel for slushing.

A twenty-four inch scraper line, connecting with 900 feet of 12-inch terra cotta lined troughs, has been completed to convey slush from the breaker to the bore hole.

LEHIGH AND WILKES-BARRE COAL COMPANY

Audenried No. 4 Colliery.—Electric hoist, No. 4 inside slope, erected.

No. 23 slope sunk from surface through rock to Lykens Valley vein, 150 feet, single track slope.

Remodeling preparation, No. 4 breaker.

Honey Brook No. 5 Colliery.—Installed a 17 and 28 x 10 x 36 Compound pump in No. 20 slope.

New breaker with new colliery buildings and outside tracks.

COXE BROTHERS AND COMPANY, INCORPORATED

Oneida Colliery.—The principal change at this operation was the abandonment of the breaker, an iron structure that had been in operation since 1891. For the centralization of preparation it was deemed wise to transport the coal to the Spring Mountain breaker, located at Jeanesville, the coal being dumped into the large railroad cars for shipment. This arrangement commenced in March.

A decided improvement was the completion of the drainage tunnel, slope No. 1, started in May, 1908. Connection was made December 21, 1909, and squared and cleaned up by December 24, when pumping was discontinued. The work covered removal of 1,295 cubic yards excavation for approach and 122 feet drifting, with 4,883.8 feet tunneling. The grade of the tunnel averages three feet per thousand, dropping at the inside end four feet per mile, thence reduced to two feet per thousand and finishing through open cut end and drift with four feet per thousand.

The new No. 8 slope has been double tracked to the Third lift and the rock work started for its extension to the bottom on 76 degrees, which will take us to the Basin, allowing for sufficient sump room to the east.

The pipe-way to convey steam and compressed air to the bottom is completed. This is 45 feet west of the slope. The hoisting engine and a 1,200 horse power boiler plant will be put up at the top of the slope, replacing the old boilers at the breaker.

At slope No. 4, an extension of the Oneida slope No. 2 workings, the East gangways have been continued and are fast approaching the eastern boundary line. Slope No. 7, an underground slope sunk from No. 1 East gangway on 30 degrees maximum pitch, has reached near the basin at 830 feet. Gangways to the west will be started as soon as the basin is proved to satisfaction, so as to provide ample sump room.

Very little work was done at Oneida No. 3, the principal production coming from Slope No. 5. Gangways were driven eastward and have reached the Spoon, which will now be followed, connecting finally with the bottom of slope, Oneida No. 2.

Strippings west of slope No. 6 have been continued and 165,808 cubic yards removed. No coal has yet been taken from these strippings.

DODSON COAL COMPANY

Morea Colliery—Outside.—New stripping plane, hoisting engine and 1,900 feet of steam line.

Air compressor at No. 4 slope.

Ash hopper and 400 foot conveyor line attached to boiler house.

Installed two new boilers, 150 horse power each; double motion breaker engine.

Complete remodeling of breaker, screening machinery, and platform arrangements.

New supply house built.

New concrete slush tanks arranged to dispose of the silt either into the mines or by railroad.

Jeanesville vertical artesian well pump.

Two new water holes, 185 feet each.

Purchase of stripping plant, including 85-ton Bucyrus shovel, Vulcan hoisting engines, two Vulcan locomotives, two 100 horse power upright tubular boilers, also dump cars, rails, etc.

Inside.—First level pump house rebuilt with steel timber and rail lagged.

Sump gangway, third level, Buck Mountain vein, 900 feet long, capacity one million gallons.

Installed in No. 4 slope one Scranton pump, 10 x 36 x 24, 8-inch column, driven by air.

MARYD COAL COMPANY

Maryd Colliery.—A new breaker was completed and began operation January 25.

Two thousand six hundred feet of 12-inch wooden pipe from Big Creek to little Creek dam for fresh water supply, No. 1 shaft, 1st level.

Completed tunnel from Diamond vein to Orchard vein, total distance driven being 365 feet.

A tunnel was driven south from Diamond vein and cut the South Dip of Holmes vein in No. 3 basin, 724 feet.

TRUMAN M. DODSON COAL COMPANY

Kaska William—Outside.—A steam shovel was purchased for loading culm from banks; also installed a pair of double engines to pull in the dirt by a new scraper line that was put in.

Installed a new pair of drums for No. 2 shaft engines, with clutch gearing, in order to be able to hoist from the several levels.

In No. 1 shaft, engine cylinders have been re-bored.

Two bore holes sunk to give fresh water for boilers, and a compressor installed to force the water from the above two water holes.

Installed new sheave wheels on top of No. 1 shaft.

Inside.—A tunnel was driven from the South Dip Skidmore to the South Dip Bottom Split, a distance of 54 feet, to procure a piece of Mammoth coal.

A tunnel was driven from the Holmes vein, No. 1 slope, to the new shaft, a distance of 230 feet; also a turnout to receive the loaded cars at the shaft. The turnout at the top of the shaft has been lengthened to hold thirteen wagons.

No. 2 shaft was driven up for a distance of 300 feet in order to prevent the ropes becoming wedged in the bore holes. This work was done without an accident, and credit is due the management and contractors for the care exercised while it was being done.

BIG CREEK COAL COMPANY

Moss Glenn Colliery.—A new slope was sunk 200 feet on what is supposed to be the Top Split of Buck Mountain vein.

A slope is now in progress and is down 250 feet on Bottom split of Buck Mountain vein.

PHILLIPS COAL COMPANY

Silver Hill Colliery.—A single track slope has been sunk on the Top Split of Buck Mountain vein to a depth of 260 feet from water level.

A pair of 12 x 12 hoisting engines installed in the North tunnel to hoist from this slope.

A plane has been built outside, 700 feet long, and a pair of 9 x 12 engines has been installed to hoist on plane.

The Rocktown tunnel in the Sharp Mountain has been opened, and a mine car track, 600 feet long, has been laid on the surface across the basin to dump coal taken from the Rocktown tunnel into a counter chute on the South Dip.

A 12 x 24 foot office has been built, in which a five-ton wagon scale with weighing beam has been placed. A new locomotive has been placed to haul coal from the top of inside slope in drift to breaker.

Two return tubular boilers, 66 inches x 16 feet have been added to the boiler plant.

Two vertical boilers have been placed at Rocktown to furnish steam for sinking the new slope.

EAST LEHIGH COAL COMPANY

East Lehigh Colliery.—A tunnel has been driven north from bottom of slope on B. vein to cut C. vein 200 feet. Size of tunnel, 12 feet wide x 7 feet high.

On August 9, the breaker was destroyed by fire. It was replaced by a breaker 58 feet wide by 78 feet deep, which was put in operation October 15.

Installed one Goyne pump in slope, 12 inches x 6 inches x 12 inches, duplex.

Built a new tower and dump chute at top of slope.

PORT CARBON COAL COMPANY

Lucy C. R. Colliery.—Installed an electric haulage plant.

Drove No. 2 tunnel north 145 feet from top bench of Mammoth vein, cutting the Holmes and Primrose veins; also No. 3 tunnel north 50 feet, cutting the Holmes vein.

GORMAN AND CAMPION

Bell Colliery.—A tunnel is now being driven 1,200 feet west of old Bell tunnel on water level, with the intention of cutting the three splits on the Mammoth and Buck Mountain veins.

MINE FOREMEN'S EXAMINATIONS

The annual examination of applicants for certificates of qualification as Mine Foremen and Assistant Mine Foremen, was held in Union Hall, Pottsville, March 23 and 24. The Board was composed of the following members: John Curran, Inspector, Pottsville; James Tinley, Superintendent, Tamaqua; Nicholas Murrey, Miner, Cumbola; James Brennen, Miner, Silver Creek.

The following persons passed a satisfactory examination and were granted certificates:

Mine Foremen

John W. Jones, Coal Dale; Patrick McGroarty, Brockton; James P. Boner, Seek; Thomas McLaughlin, Maryd.

Assistant Mine Foremen

Owen W. Langton, Silver Creek; John F. Coyle, Silver Creek; John J. McGovern, Silver Creek; James Murphy, Kaska; Charles W. Augustine, Barnesville.

NINETEENTH DISTRICT

SCHUYLKILL COUNTY

Pottsville, Pa., February 26, 1910

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor of transmitting herewith my annual report as Inspector of Mines of the Nineteenth Anthracite District for the year ending December 31, 1909.

Respectfully submitted,

MICHAEL J. BRENNAN,
Inspector.

SUMMARY OF STATISTICS

Number of collieries,	17
Number of mines,	49
Number of mines in operation,	49
Number of tons of coal shipped to market,	2,256,304
Number of tons used at mines for steam and heat,	419,979
Number of tons sold to local trade and used by employes,	34,009
Number of tons produced,	2,710,292
Number of tons produced by compressed air machines,	.....
Number of tons produced by electrical machines,	.....
Number of persons employed inside of mines,	4,814
Number of persons employed outside,	2,445
Number of fatal accidents inside of mines,	8
Number of fatal accidents outside,	3
Number of non-fatal accidents inside of mines,	34
Number of non-fatal accidents outside,	6
Number of tons of coal produced per fatal accident inside,	338,787
Number of persons employed per fatal accident inside,	602
Number of persons employed per fatal accident outside,	815
Number of persons employed per non-fatal accident inside,	142
Number of persons employed per non-fatal accident outside,	408
Number of wives made widows,	6
Number of children made orphans,	13
Number of steam locomotives used inside of mines,	1
Number of steam locomotives used outside,	25
Number of compressed air locomotives used inside,	.....
Number of compressed air locomotives used outside,	.....
Number of electric motors used inside,	12
Number of electric motors used outside,	.....
Number of fans in use,	40
Number of furnaces in use,	.....
Number of gaseous mines in operation,	34
Number of non-gaseous mines in operation,	15
Number of new mines opened,	4
Number of old mines abandoned,	1

TABLE A

PRODUCTION OF COAL

Names of Operators	Tons
Philadelphia and Reading Coal and Iron Company,	1,087,900
St. Clair Coal Company,	426,589
Lytle Coal Company,	317,966
Pine Hill Coal Company,	263,074
Oak Hill Coal Company,	241,712
Buck Run Coal Company,	175,756
Mt. Hope Coal Company,	83,467
Darkwater Coal Company,	58,549
John H. Davis Coal Company,	29,153
Butcher Creek Coal Company,	25,028
E. White and Company,	1,098
Total,	2,710,292

Production by Counties

Schuylkill,	2,710,292

TABLE B.—Fatal and non-fatal accidents inside and outside of mines; number of tons of coal produced per accident; number of persons employed; number employed per accident

Names of Operators	Fatal Accidents			Non-Fatal Accidents			Tons of coal produced per fatal accident inside	Tons of coal produced per non-fatal accident inside	Number of employes inside	Number of employes outside	Total number of employes	Number of employes inside per fatal accident	Number of employes outside per fatal accident	Number of employes inside per non-fatal accident	Number of employes outside per non-fatal accident
	Inside	Outside	Total	Inside	Outside	Total									
Philadelphia and Reading Coal and Iron Co.	3	2	5	14	3	17	362,633	77,707	2,284	1,125	3,409	761	562	163	375
St. Clair Coal Co.,	1	.....	1	1	.....	1	426,589	426,589	547	307	854	547	.....	547	.....
Lytle Coal Co.,	2	.....	2	8	.....	8	158,983	39,746	576	248	824	288	.....	72	.....
Pine Hill Coal Co.,	1	.....	1	1	1	2	263,074	263,074	387	187	574	387	.....	387	187
Oak Hill Coal Co.,	.....	.....	.....	4	.....	4	.....	60,428	430	188	618	.....	.....	108	.....
Buck Run Coal Co.,	1	.....	1	5	.....	5	175,756	35,151	282	127	409	282	.....	56	.....
Darkwater Coal Co.,	.....	1	1	1	1	2	.....	58,549	101	50	151	.....	50	151	50
Butcher Creek Coal Co.,	.....	.....	.....	.....	1	1	.....	.....	29	39	68	.....	.....	.....	39
Miscellaneous Companies,	.....	.....	.....	.....	.....	.....	.....	.....	178	174	352	.....	.....	.....	.....
Totals and averages for district,	8	3	11	34	6	40	338,787	79,714	4,814	2,445	7,259	602	815	142	408

TABLE C.—Classification of Fatal Accidents Inside and Outside of Mines

	Months													
	January	February	March	April	May	June	July	August	September	October	November	December	Totals	Percentages
Causes of Accidents Inside														
Falls of coal,							1		1				2	25.00
Falls of slate,					2								2	25.00
Falls of roof,			1										1	12.50
Explosions of gas,						1							1	12.50
Explosions of powder and dynamite,												1	1	12.50
Blasts, premature and otherwise,							1						1	12.50
Totals,			1		2	1	2		1			1	8	100.00
Causes of Accidents Outside														
Cars,				1							1		2	66.67
Miscellaneous,							1						1	33.33
Totals,				1			1				1		3	100.00
Grand totals inside and outside,			1	1	2	1	3		1		1	1	11	

TABLE D.—Classification of Non-Fatal Accidents Inside and Outside of Mines

	Months													
	January	February	March	April	May	June	July	August	September	October	November	December	Totals	Percentages
Causes of Accidents Inside														
Falls of coal,				1		2		1	1	2	1	1	9	26.47
Falls of slate,					2						1		3	8.83
Falls of roof,												1	1	2.94
Mine cars,										1	1		2	5.88
Explosions of gas,	4	2						3		3	2		14	41.17
Explosions of powder and dynamite,	2												2	5.88
Miscellaneous,			1							1		1	3	8.83
Totals,	6	2	1	1	2	2		4	1	7	5	3	34	100.00
Causes of Accidents Outside														
Cars,	1												1	16.67
Machinery,	1						1					1	3	50.00
Miscellaneous,				2									2	33.33
Totals,	2			2			1					1	6	100.00
Grand totals inside and outside,	8	2	1	3	2	2	1	4	1	7	5	4	40	

TABLE E.—Occupations of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Inside													
Miners,			1		1	1	2		1			1	7
Miners' laborers,					1								1
Totals,			1		2	1	2		1			1	8
Outside													
Engineers and firemen,							1						1
Laborers,				1							1		2
Totals,				1			1				1		3
Grand totals inside and outside,			1	1	2	1	3		1		1	1	11

TABLE F.—Occupations of Persons Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Inside													
Miners,	6	2	1	1		2		4	1	6	3	1	27
Miners' laborers,					2					1	2	1	6
Contractors,												1	1
Totals,	6	2	1	1	2	2		4	1	7	5	3	34
Outside													
Slatepickers (boys),												1	1
Timbermen,				1									1
Craners,							1						1
Laborers,	2			1									3
Totals,	2			2			1					1	6
Grand totals inside and outside,	8	2	1	3	2	2	1	4	1	7	5	4	40

TABLE G.—Nationality of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
American,					1								1
Polish,					1		1						2
Hungarian,							1						1
Slavonian,				1			1				1		3
Lithuanian,									1			1	2
Austrian,			1										1
Russian,						1							1
Totals,			1	1	2	1	3		1		1	1	11

TABLE H.—Nationality of Persons Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
American,				1			1		1	2		2	7
English,								2					2
Irish,	1		1	1							1		4
Polish,	1	2			2	1				1	1		8
Hungarian,	1			1								1	3
Italian,						1							1
Slavonian,	2									3	1	1	7
Lithuanian,	2									1	2		5
Austrian,								2					2
Russian,	1												1
Totals,	8	2	1	3	2	2	1	4	1	7	5	4	40

TABLE I.—Operators and mines, kind of openings, type and size of fans, size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents and number of persons employed inside

Names of Operators and Mines	Kind of opening	Gaseous or non-gaseous	Method of ventilation	Diameter of fan in feet and inches	Width of blades in feet and inches	Depth of blades in feet and inches	Number of revolutions per minute	Water gauge developed—in inches	Name of fan	Power used	Number of splits of air currents	Number of cubic feet of air per minute entering the mine at inlet	Total quantity of air per minute circulating in all the splits in cubic feet	Number of cubic feet per minute passing out at outlet	Number of persons employed inside
Philadelphia and Reading Coal and Iron Co.															
Wadesville Colliery:															
Wadesville,	Shaft,	Gaseous,	Fan,	21	7	6	73	1.4	Guibal,	Steam,	19	159,135	57,800	164,305	287
Wadesville,	Shaft,	Gaseous,	Fan,	21	7	6	76	1.4	Guibal,	Steam,					
Primrose,	Slope,	Non-gas.,	Fan,												
Pine Knot Colliery:															
Pine Knot,	Shaft,	Gaseous,	Fan,	18	5	2	42	.8	Guibal,	Steam,	7	20,100	14,480	21,200	79
Pine Knot,	Shaft,	Gaseous,													
Glendower Colliery:															
West,	Slope,	Gaseous,	Fan,	12	4	3.6	120	1.2	Guibal,	Steam,	9	61,375	37,870	63,802	128
Taylorsville,	Slope,	Gaseous,	Fan,	21	5.5	4.6	80	.4	Guibal,	Steam,	9	84,739	35,580	85,975	110
Thomaston Colliery:															
Thomaston,	Slope,	Gaseous,	Fan,	18	6	5.2	68	1.1	Guibal,	Steam,	4	44,541	39,896	45,347	52
	Slope,	Gaseous,													
Thomaston,	Drift,	Non-gas.,	Fan,	12	4.2	3.5	50	.2	Guibal,	Steam,	2	15,000	13,000	15,200	34
Otto Colliery:															
Otto,	Shaft,	Gaseous,	Fan,	15	5	3.5	55	.5			3	15,027	8,164	15,400	19
Nest,	Slope,	Gaseous,	Fan,	21	7	6	84	2			9	80,220	49,089	81,792	150
W. Ash,	Drift,	Gaseous,	2 fans,	15	5	3.5	92	.9	Guibal,	Steam,	5	50,260	34,310	51,030	100
Holmes,	Slope,	Gaseous,	Fan,	15	5	3.5	48	.9			3	38,400	17,200	38,900	37
Welsh Company,	Drift,	Non-gas.,	Fan,	12	4.2	3.6	68	1			1	14,200	7,200	14,500	25

Phoenix Park Colliery:															
Phoenix Park,	Slope,	Gaseous,	Fan,	21	7	6	80	1.6	Guibal,	Steam,	14	111,510	79,350	120,200	306
Peach Mountain,	Slope,	Gaseous,	Fan,	15	5	3.5	90	1							
Number 6,	Slope,	Gaseous,	Fan,	8			90	.2	Guibal,	Steam,	1	17,054	†		9
John Veith Colliery:															
Number 1,	Shaft,	Gaseous,	Fan,	15	5	4.6	30	.2	Guibal,	Steam,	5	18,640	11,850	19,600	34
Number 2,	Shaft,	Gaseous,	Fan,	15	5	4.6	40	.2	Guibal,	Steam,	5	24,910	17,030	25,980	76
St. Clair Coal Co.															
St. Clair Colliery:															
St. Clair,	Shaft,	Gaseous,	Fan,	14	5	3.6	40	.5	Guibal,	Steam,	5	33,095	30,200	34,500	114
St. Clair,	Tunnel,	Non-gas.,	Fan,												
St. Clair,	Slope,	Gaseous,	Fan,	14	5	3.6	95	1	Guibal,	Steam,	6	80,320	63,520	85,700	300
Lytle Coal Co.															
Lytle Colliery:															
Lytle,	Shaft,	Gaseous,	Fan,	18	7	5.10	86	2							
Lytle,	Slope,	Gaseous,	Fan,	18	7	5.10	90	1.9							
Lytle,	Slope,	Gaseous,	Fan,	18	7	5.5	100	1.8	Guibal,	Steam,	20	349,700	340,600	351,949	300
				18	7	5	80	1.8							
Pine Hill Coal Co.															
Pine Hill Colliery:															
Pine Hill,	Shaft,	Gaseous,	Fan,	16	4.10	4.6	60	.9	Guibal,	Steam,	9	137,000	124,000	139,200	183
							112	1		Electricity,					
Pine Hill,	Slope,	Gaseous,	Fan,	22	6	5.6	68	1	Guibal,	Steam,					
Pine Hill,	Drift,	Gaseous,	Fan,	16	4.10	4.6	99	.7	Crawford, McCrimson,	Electricity,	6	70,330	55,400	73,300	152
Oak Hill Coal Co.															
Oak Hill Colliery:															
Oak Hill,	Shaft,	Gaseous,	Fan,	24	8.4	6.3	70	1	Guibal,	Steam,	12	74,000	54,000	78,500	158
Oak Hill,	Slope,	Gaseous,													
Oak Hill,	Slope,	Gaseous,	Fan,	5	2.4	2.8	230	6	Stine,	Steam,	1	6,000	4,000	6,200	18
Oak Hill,	Drift,	Non-gas.,	Fan,	12	4	3.6	68	2	Guibal,	Steam,	2	19,000	13,000	20,200	24
Oak Hill,	Drift,	Non-gas.,	Fan,	8	3	3.2	210	.6	Stine,	Steam,	2	27,500	23,300	29,100	44
Buck Run Coal Co.															
Buck Run Colliery:															
Buck Run,	Slope,	Gaseous,	Fan,	12	3.9	3.5	95	1.6							
				16	5	4	60	.5							
Buck Run,	Slope,	Gaseous,	Fan,	16	4.7	3.4	95	1.5	Guibal,	Steam,	11	93,500	63,500	96,100	250
Buck Run,	Drift,	Non-gas.,	Natural,												21
Mt. Hope Coal Co.															
Mt. Hope Colliery:															
Mt. Hope,	4 drifts,	Non-gas.,	Natural,												94

†Old workings.

TABLE I—Continued

Names of Operators and Mines	Kind of opening	Gaseous or non-gaseous	Method of ventilation	Diameter of fan in feet and inches	Width of blades in feet and inches	Depth of blades in feet and inches	Number of revolutions per minute	Water gauge developed—in inches	Name of fan	Power used	Number of splits of air currents	Number of cubic feet of air per minute entering the mine at inlet	Total quantity of air per minute circulating in all the splits in cubic feet	Number of cubic feet per minute passing out at outlet	Number of persons employed inside
Darkwater Coal Co.															
Newcastle Colliery:															
Newcastle,	Slope,	Gaseous,	Fan,	20	7	5	62	.9	Guibal,	Steam,	5	35,200	18,500	35,900	68
Newcastle,	Slope,	Gaseous,	Fan,												
Newcastle,	Drift,	Non-gas.,	Fan,	10	4	3	64	1	Guibal,	Steam,	2	9,500	2,560	9,200	9
John H. Davis Coal Co.															
Ellsworth Colliery:															
Ellsworth,	Slope,	Non-gas.,	Fan,	6	1.8	1.1	160	.3	Guibal,	Steam,	3	7,600	7,100	7,925	37
Butcher Creek Coal Co.															
Laurel Run Colliery:															
Laurel Run,	2 slopes,	Non-gas.,													29
E. White and Co.															
Howard Colliery:															
Howard,	Slope,	Gaseous,	Fan,	12	4.2	3.4	45	.8	Guibal,	Steam,	2	25,500	15,060	25,700	45

Note—Six non-gaseous mines with natural ventilation not included in table.

TABLE 1.—Operators, location of collieries, railroads, etc.

Names of Operators and Collieries	County	Name of General Superintendent	Post Office	Name of Superintendent	Post Office	Railroad to Mine
Philadelphia and Reading Coal and Iron Co.						
Wadesville, Pine Knot, Glendower, Thomaston, Otto, Phoenix Park, John Veith, Anchor Washery,	Schuylkill,	W. J. Richards,	Pottsville,	Reese Tasker,	Pottsville,	Philadelphia and Reading
St. Clair Coal Co.						
St. Clair, St. Clair Washery,	Schuylkill,			William F. Smythe	Pottsville,	Philadelphia and Reading
Lytle Coal Co.						
Lytle,	Schuylkill,	R. A. Quin,	Wilkes-Barre,	D. V. Randall,	Minersville,	Pennsylvania
Pine Hill Coal Co.						
Pine Hill,	Schuylkill,			G. H. Keiser,	Minersville,	Pennsylvania
Oak Hill Coal Co.						
Oak Hill,	Schuylkill,			Charles A. Schwenk	Minersville,	Philadelphia and Reading
Buck Run Coal Co.						
Buck Run,	Schuylkill,	James B. Neale,	Minersville,	John Conway,	Minersville,	Philadelphia and Reading
Mt. Hope Coal Co.						
Mt. Hope,	Schuylkill,	I. D. Heahm,	Port Carbon,			Philadelphia and Reading
Darkwater Coal Co.						
New Castle,	Schuylkill,	James B. Neale,	Minersville,	John Conway,	Minersville,	Philadelphia and Reading
John H. Davis Coal Co.						
Ellsworth,	Schuylkill,			John H. Davis,	St. Clair,	Philadelphia and Reading
Butcher Creek Coal Co.						
Laurel Run,	Schuylkill,			L. J. Whims,	St. Clair,	Philadelphia and Reading

TABLE 1—Continued

Names of Operators and Collieries	County	Name of General Superintendent	Post Office	Name of Superintendent	Post Office	Railroad to Mine
E. White and Co. Howard,	Schuylkill,			Richard White,	Pottsville,	Philadelphia and Reading
Salem Hill Coal Co. Salem Hill,*	Schuylkill,					

*Abandoned.

TABLE 2.—Number of tons of coal mined, number of days worked, number of persons employed, number killed and injured, quantity of powder, dynamite and so-called safety explosives used, etc.

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Explosives: Number of pounds of powder used	Explosives: Number of pounds of dynamite used	Explosives: Number of pounds of so-called safety explosives used	Number of horses and mules
Philadelphia and Reading Coal and Iron Co.													
Wadesville,	Schuylkill,	316,964	28,610	1,117	346,421	240	805	2	8	57,750	30,081	34,073	50
Pine Knot, Glendower, Thomaston,	Schuylkill,	251,935	67,469	213	319,617	231	1,025	2	7	50,375	79,895	81,653	80
Otto,	Schuylkill,	137,407	44,527	1,563	183,497	221	709	1	----	37,175	72,149	45,805	80
Phoenix Park,	Schuylkill,	146,900	24,493	1,791	173,184	223	601	----	1	----------	14,782	55,965	72
John Veith,	Schuylkill,	19,360	683	----------	20,043	------	202	----	----	----------	37,675	17,350	7
Anchor Washery,	Schuylkill,	38,424	4,530	2,184	45,138	123	67	----	1	----------	60	----------	----
Totals,		910,720	170,312	6,868	1,087,900	------	3,409	5	17	145,300	234,642	234,846	289
St. Clair Coal Co.													
St. Clair,	Schuylkill,	281,922	75,400	7,593	364,915	197	824	1	1	233,525	18,488	----------	63
St. Clair Washery,	Schuylkill,	61,674	----------	----------	61,674	127	30	----	----	----------	----------	----------	----
Totals,		343,596	75,400	7,593	426,589	------	854	1	1	233,525	18,488	----------	63
Lytle Coal Co.													
Lytle,	Schuylkill,	240,632	69,842	7,492	317,966	222	824	2	8	239	118,000	----------	87
Pine Hill Coal Co.													
Pine Hill,	Schuylkill,	237,441	24,500	1,133	263,074	265	574	1	2	161,550	61,783	----------	38

TABLE 2—Continued

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Explosives: Number of pounds of powder used	Explosives: Number of pounds of dynamite used	Explosives: Number of pounds of so-called safety explosives used	Number of horses and mules
Oak Hill Coal Co.													
Oak Hill,	Schuylkill,	208,354	30,000	3,358	241,712	231	618	....	4	124,625	53,963	....	55
Buck Run Coal Co.													
Buck Run,	Schuylkill,	153,201	21,900	655	175,756	239	409	1	5	23,300	71,538	....	33
Mt. Hope Coal Co.													
Mt. Hope,	Schuylkill,	70,740	6,700	6,027	83,467	239	173	....	....	1,500	12,750	....	13
Darkwater Coal Co.													
Newcastle,	Schuylkill,	45,726	12,600	223	58,549	220	151	1	2	4,875	20,475	....	9
John H. Davis Coal Co.													
Ellsworth,	Schuylkill,	24,809	3,800	544	29,153	292	88	....	....	50	11,000	....	7
Butcher Creek Coal Co.													
Laurel Run,	Schuylkill,	20,412	4,500	116	25,028	189	68	....	1	....	6,000	100	8
E. White and Co.													
Howard,	Schuylkill,	673	425	....	1,098	7	91	....	....	250	375	....	7
Grand totals,		2,256,304	419,979	34,009	2,710,292	.....	7,259	11	40	485,214	695,214	234,946	609

TABLE 2.—Part 2.

Names of Operators	County	Number of Boilers					Locomotives			Number of steam engines of all classes	Total horse power	Number of pumps delivering water to surface	Capacity in gallons per minute	Quantity delivered to surface per minute—gallons	Number of electric dynamos	Number of air compressors
		Cylindrical	Horse power	Tubular	Horse power	Total horse power	Steam	Air	Electric							
Philadelphia and Reading Coal and Iron Co.,	Schuylkill,			72	12,150	12,150	11			118	21,847	14	17,132	6,169		8
St. Clair Coal Co.,				20	3,100	3,100	6		5	20		3	1,250	800	4	
Lytle Coal Co.,				21	3,200	3,200	1			17	7,000		2,500	928	1	3
Pine Hill Coal Co.,				3	2,250	2,250			4	26	1,987	4	13,000	3,000	2	1
Oak Hill Coal Co.,				5	2,500	2,500	3			18	1,430	2	2,000	1,100		
Buck Run Coal Co.,				8	1,500	1,500	1		3	26	1,020	3	1,800	400	1	1
Mt. Hope Coal Co.,				8	800	800	2			11	675					
Darkwater Coal Co.,				4	600	600	1			16	730	3	4,500	800		1
John H. Davis Coal Co.,				5	500	500				6	210	2	720	720		1
Butcher Creek Coal Co.,				3	240	240				6	180	1				
E. White and Co.,				4	525	525				8	265	3	2,180	1,430		
Totals,				153	27,365	27,365	25		12	272	35,344	35	45,082	15,347	8	15

TABLE 3.—Number of each class of employes inside and outside of mines

Names of Operators	County	Inside											Outside									Grand total inside and outside
		Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Doorboys and helpers	Pumpmen	Company men	All other employes	Total inside	Superintendents	Foremen	Blacksmiths and carpenters	Engineers and firemen	Slate pickers (boys)	Slate pickers (men)	Bookkeepers and clerks	All other employes	Total outside	
Philadelphia and Reading Coal and Iron Co.,	Schuylkill,	9	29	----	772	314	135	1	13	417	594	2,284	----	13	60	155	135	54	19	689	1,125	3,409
St. Clair Coal Co.,		2	----	4	260	121	32	24	8	------	96	547	1	3	20	44	67	41	4	127	307	854
Lytle Coal Co.,		1	2	11	254	51	48	15	------	54	140	576	1	1	12	36	61	37	7	93	248	824
Pine Hill Coal Co.,		2	----	5	188	86	60	4	2	11	29	387	1	1	8	14	55	15	5	88	187	574
Oak Hill Coal Co.,		1	----	7	260	74	30	3	3	33	19	430	1	3	11	16	54	3	4	96	188	618
Buck Run Coal Co.,		1	1	1	120	57	17	5	2	74	4	282	1	1	9	12	13	8	6	77	127	409
Mt. Hope Coal Co.,		1	3	----	40	33	5	------	------	12	------	94	1	2	5	14	7	2	1	47	79	173
Darkwater Coal Co.,		1	----	1	40	18	6	1	2	10	22	101	1	1	4	6	6	1	1	30	50	151
John H. Davis Coal Co.,		1	1	1	17	7	3	------	2	7	------	39	1	1	2	5	7	2	1	30	49	88
Butcher Creek Coal Co.,		1	----	----	9	15	3	------	1	------	------	29	1	1	1	6	2	2	1	25	39	68
E. White and Co.,		1	----	----	18	10	4	------	2	3	7	45	1	1	2	8	13	2	1	18	46	91
Totals,		21	36	30	1,978	786	343	53	35	621	911	4,814	10	28	134	316	420	167	50	1,320	2,445	7,259

TABLE 3.—Part 2

Names of Operators	County	Average Number of Days Worked in Breaker												
		January	February	March	April	May	June	July	August	September	October	November	December	Total
Philadelphia and Reading Coal and Iron Co.,	Schuylkill,	20	19	26	23	17	14	12	15	15	21	24	23	229
St. Clair Coal Co.,		19	14	22	21	8	12	10	13	14	19	22	23	197
Lytle Coal Co.,		22	16	25	22	19	16	12	11	14	21	23	21	222
Pine Hill Coal Co.,		24	24	25	23	22	20	18	20	20	20	24	25	265
Oak Hill Coal Co.,		22	20	26	19	14	14	11	20	20	21	22	22	231
Buck Run Coal Co.,		19	15	23	21	16	14	10	22	24	25	25	25	239
Mt. Hope Coal Co.,		22	19	27	21	12	20	20	3	21	23	25	26	239
Darkwater Coal Co.,			15	26	25	24	26	25	18		12	24	25	220
John H. Davis Coal Co.,		25	23	27	23	25	22	25	25	24	24	25	24	292
Butcher Creek Coal Co.,		24	19	19	16		12	12	13	12	20	24	18	189
E. White and Co.,		7												7

TABLE 4.—Fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Colliery	County	Nature and Cause of Accident in Brief
March 1	Michael Vesatina,	Austrian,	Miner,	34	M.	1	4	Pine Hill,		Killed by fall of rock. While turning drilling machine on low side of gangway a piece of rock fell on him. His butties said they blasted a hole in the top and removed part of the rock, but could not remove the piece that fell on him.
April 26	George Shelinskie,	Slavonian,	Laborer,	34	M.	1	1	Otto,		Leg crushed and fatally injured. When returning from work he attempted to jump on a loaded trip of mine cars that was being pushed by a locomotive near the entrance to the White Ash drift. Died the same day. Outside.
May 1	Ignatz Gregor,	Polish,	Laborer,	42	M.	1	1	Wadesville,		Fatally injured by fall of slate while working at face of West Skidmore gangway on plane. His miner said he had examined the roof and thought it was solid and safe to work under. Died same day.
13	Thomas Butler,	American,	Miner,	42	S.			Lytle,	Schuylkill,	Killed by fall of top slate while shoveling coal near face of breast.
June 3	Onifer Onescavage,	Russian,	Miner,	25	S.			Lytle,		Fatally burned by explosion of gas. He went to face of breast to get a drill he had loaned the men who were working the breast. The men were skipping pillar and rebuilding brattice to get to face of breast to remove the gas. He had been warned not to go up as there was gas at face. Died the same day.
July 9	Martin Olzowski,	Polish,	Miner,	33	S.			St. Clair,		Fatally injured by fall of coal while working at face of breast with pick. Died July 12.

July	15	Anthony Pencheslan,	Hungarian,	Fireman,	40	M.	1	6	Newcastle,		Burned by explosion of gas in boiler room while cleaning the fires from beneath the boilers. The hot coal coming in contact with water in the ash pit caused an explosion and the hot coal and gas were thrown into his face. Died July 22. Outside.
	28	Joseph Turza,	Slavonian,	Miner,	32	S.			Wadesville,		Killed by blast in No. 106 East Top Split. The men in No. 105 were driving heading to No. 106. They fired a hole, which opened the heading to No. 106, but left part of the drill hole remain. They charged and fired the remainder of the hole after they had notified Turza and his butty in No. 106.
Sept.	15	George Dangallis,	Lithuanian,	Miner,	33	S.			Buck Run,	Schuylkill,	Killed by fall of coal at face of breast while trimming loose pieces of coal after a blast.
Nov.	18	George Verbash,	Slavonian,	Laborer,	33	M.	1		Pine Knot,		Fatally injured by being run over by empty trip of cars while walking on locomotive track near Thomaston, on his way to work in the morning. The trip was being pushed by a locomotive from Pine Knot to Glendower colliery. Died on way to hospital. Outside.
Dec.	31	John Dubzick,	Lithuanian,	Miner,	23	M.	1	1	Glendower,		Fatally burned by powder while preparing cartridge in breast. Died January 3, at Pottsville Hospital.

TABLE 5.—Non-fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Colliery	County	Nature and Cause of Accident in Brief
Jan. 5	George Weaver,	Russian,	Miner,	26	S.	Lytle,		Burned by gas. Weaver uncovered safety lamp to fire blast and ignited the gas.
	Louis Rimavage,	Lithuanian,	Miner,	24	S.			
20	Charles Minacavage,	Lithuanian,	Miner,	30	M.	Lytle,		Face and hands burned by explosion of gas. Kufto ignited blast with pipe and set fire to gas.
	Stiney Kufto,	Polish,	Miner,	32	M.			
29	Michael Mahoney,	Irish,	Laborer,	59	M.	Pine Knot,		Head cut and body injured. He stepped in front of empty cars and was knocked down and dragged by them. Outside.
30	Charles Biso,	Slavonian,	Miner,	24	S.	Oak Hill,		Hands and face burned by explosion of powder in breast heading while preparing charge for blast.
	Mike Demshock,	Slavonian,	Miner,	38	M.			
	Andrew Kish,	Hungarian,	Laborer,	33	M.	Pine Hill,		Leg fractured. While assisting to move sprocket wheel it fell on him. Outside.
Feb. 8	Lown Borick,	Polish,	Miner,	36	M.	Lytle,	Schuylkill,	Face and hands burned by explosion of gas. They unlocked their lamps to ignite blast. The fire boss had locked the lamps in the morning.
	Steve Polushunkus,	Polish,	Miner,	32	M.			
March 16	John Murphy,	Irish,	Miner,	60	M.	Pine Knot,		Arm fractured. He was helping to take timber from gangway to airway, when a piece of timber fell and struck him.
April 7	William Norton,	Irish,	Miner,	22	S.	Phoenix Park,		Head injured by fall of coal while removing mining bench at face of breast.
17	Mike Colavish,	Hungarian,	Laborer,	40	M.	Anchor Washery,		Leg fractured. Culm bank rushed, pushing two sheet iron from their fastenings, one of which struck his leg. Outside.
29	Richard Hay,	American,	Timberman,	25	M.	Newcastle,		Eye lacerated. While pulling bell wire on plane it broke and one end struck him in eye. Outside.

May	1	Joe Novoskosk,	Polish,	Laborer,	24	M.	Wadesville,			Both legs fractured by fall of slate on gangway near face.
		Casper Dushusk,	Polish,	Laborer,	25	M.				Head cut by fall of slate in gangway near face.
June	4	Charles Artz,	Polish,	Miner,	44	M.	Pine Hill,			Leg fractured by fall of coal from pillar of breast.
	25	George John,	Italian,	Miner,	21	S.	Oak Hill,			Leg fractured by fall of coal while working at face of breast.
July	13	Emmet Quinn,	American,	Craner,	19	S.	Laurel Run,			Foot injured. Caught in cogs of steam shovel. Outside.
Aug.	4	Benjamin Martin,	English,	Miner,	30	M.	Buck Run,			Face and body burned by explosion of gas at face of breast. They went to face of breast with naked lights after they had been warned by fire boss not to do so.
		John Martin,	English,	Miner,	39	M.				
	21	John Costick,	Austrian,	Miner,	26	S.	Oak Hill,			Leg fractured by fall of coal at face of breast while trimming down loose pieces of coal after blast.
	25	George Kunie,	Austrian,	Miner,	47	M.	Lytle,			Face and hands burned by explosion of gas.
Sept.	14	John H. Lord,	American,	Miner,	34	M.	Glendower,			Hand injured by fall of coal. He had the hand dressed to go back to work and then went to stable boss who put turpentine on it. The turpentine came in contact with his lighted lamp, burning the hand severely.
Oct.	5	Thomas McSurdy,	American,	Miner,	48	M.	Glendower,	Schuylkill,		Leg fractured by rush of coal from battery.
	15	Mike Cosalavage,	Lithuanian,	Laborer,	27	M.	Buck Run,			Collar bone fractured. Caught between prop and mine car.
	19	Joseph Rutkus,	Slavonian,	Miner,	33	S.	Wadesville,			Face and hands burned by gas while igniting blast at face of breast.
		Joseph Kasales,	Slavonian,	Miner,	33	M.				
		John Sincosky,	Polish,	Miner,	24	S.	Lytle,			Hands and face burned by explosion of gas while igniting blast in chute.
	26	John Somolskie,	Slavonian,	Miner,	44	M.	Newcastle,			Body injured by fall of coal while opening heading at face of breast.
	27	William Conville,	American,	Miner,	39	M.	Thomaston,			Hand bruised by fall of coal while trimming down loose pieces at face of breast.
Nov.	3	Theodore Zullick,	Slavonian,	Miner,	32	M.	Wadesville,			Hip dislocated by fall of slate near face of breast.
	23	Anthony Bervatonis,	Lithuanian,	Miner,	46	M.	Glendower,			Body bruised. While crossing between cars he fell under them, West slope, West seven foot seam.
	24	George Scherler,	Polish,	Miner,	36	M.	Wadesville,			Hands and face burned by gas. While igniting fuse Scherler ignited the gas, burning both men.
		Paul Namriss,	Lithuanian,	Laborer,	23	S.				
	26	Michael Hobin,	Irish,	Laborer,	49	M.	Buck Run,			Head and hip injured by fall of coal on gangway while cleaning up fall.

TABLE 5—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Colliery	County	Nature and Cause of Accident in Brief
Dec. 4	Paul Selinah,	Slavonian,	Miner,	52	M.	St. Clair,		Leg fractured by fall of coal while removing pillar.
	Stephen Crinn,	Hungarian,	Laborer,	25	S.	Buck Run,		Arm fractured. Struck by flying piece of wood from wreck at bottom of slope.
14	Michael McGonigal,	American,	Slatepicker,	16	S.	Wadesville,	Schuylkill,	Hip and breast bruised. Caught by elevator rope in breaker. Outside.
30	Hugh Dolan,	American,	Contractor,	42	M.	Pine Knot,		Foot fractured by fall of rock near face of tunnel.

CONDITION OF COLLIERIES

PHILADELPHIA AND READING COAL AND IRON COMPANY

Wadesville, Pine Knot, Glendower, Thomaston, Otto, Phoenix Park and John Veith.—The safety, drainage and ventilation are good. The management deserves great credit for the system of drainage conducted in these collieries. The roads are kept in model condition.

ST. CLAIR COAL COMPANY

St. Clair.—Ventilation and drainage fair, condition as to safety, good.

LYTLE COAL COMPANY

Lytle.—Ventilation and drainage fair; condition as to safety, good.

PINE HILL COAL COMPANY

Pine Hill.—Ventilation fair. Drainage in E. B. Heath bad; in E. Seven No. 2 level bad; in remainder of colliery fair; condition as to safety, good.

OAK HILL COAL COMPANY

Oak Hill.—Ventilation fair; drainage neglected in greater part of colliery; condition as to safety, good.

BUCK RUN COAL COMPANY

Buck Run.—Ventilation fair; drainage fair, except in East Daniel and East Crosby veins; condition as to safety, good.

MT. HOPE COAL COMPANY

Mt. Hope.—Ventilation natural; drainage fair; condition as to safety, good.

DARKWATER COAL COMPANY

Newcastle.—Ventilation fair; drainage fair, except in Mud drift; condition as to safety, good.

JOHN H. DAVIS COAL COMPANY

Ellsworth.—Ventilation fair; drainage fair; condition as to safety, good.

BUTCHER CREEK COAL COMPANY

Laurel Run.—Ventilation and drainage fair; condition as to safety, good.

E. WHITE AND COMPANY

Howard.—Ventilation and drainage fair; condition as to safety bad on account of squeeze.

IMPROVEMENTS

PHILADELPHIA AND READING COAL AND IRON COMPANY

Wadesville Colliery.—Slope on Primrose vein is being sunk; now driven for two lifts. Air hole 200 feet east of slope with an 8-foot blow fan.

Slope on Holmes being sunk directly under above mentioned slope.

A pair of 12¼ x 15 Flory engines hoist out of the above slopes.

Water in old Vulcan slope on Holmes vein tapped by drilling bore hole from surface; drained into old workings below. Slope is being reopened and extended.

Slush bore hole 50 feet south of breaker drilled to Holmes, a distance of 440 feet. Slush headings are being driven in Bottom Split of Primrose vein, and when completed all the workings in this vicinity will be filled with slush.

Traveling-way driven in East Bottom Split of Primrose to Tender shaft.

Tunnel driven from East Bottom Split to Primrose at Breast No. 7 to Holmes, to provide a landing on Tender shaft.

Tunnel is being driven from East Bottom Split to Primrose to Holmes at Breast No. 28.

Traveling-way east of Holmes plane finished from shaft level to 1st lift.

In East Top Split, shaft level, tapped water in St. Clair shaft workings. Now reopening gangway toward shaft.

Rock hole driven from West Skidmore, shaft level, to East bottom bench, 1st lift, No. 2 tunnel, for air, a distance of 90 feet.

A tunnel driven from Seven Foot vein to Skidmore vein, to be used as runabout for bottom of Skidmore plane.

Rock hole driven from West Seven Foot gangway to West Skidmore gangway, shaft level, for air, a distance of 28 feet.

Rock hole driven from East Seven Foot gangway to East Skidmore gangway, shaft level, for air, a distance of 27 feet.

Pine Knot Colliery.—No. 2 shaft was commenced September 17, 1907, and finished to same depth as No. 1 shaft May 11, 1909. New level is being opened up on No. 2 shaft, 161 feet from surface. Tunnels are being driven north and south.

Otto Colliery.—No. 2 shaft was connected with Nest slope No. 7 level workings.

Phoenix Park Colliery.—Single track slope is being sunk through old workings from surface on Tracy vein, Easterly dip.

Glendower Colliery.—The breaker was abondoned and railroad track extended from Glendower to Pine Knot, where Glendower coal is now prepared for market.

LYTLE COAL COMPANY

Lytle Colliery—Inside—Second Level.—Tunnel, Little Diamond to Big Diamond, 216 feet.

Third Level.—Tunnel, Four Foot to Skidmore, 333 feet.

Fourth Level.—Air tunnel, Tracy to Tracy, 31 feet.
5th Level.—Air tunnel, White Ash to Middle Bench, 114 feet.
Sixth Level.—Main tunnel, 213 feet.
Fifty steel, wood frame mine cars purchased.
Outside.—New boiler coal conveyor from breaker to boiler house.
New railroad siding laid to barn.
Erected 50,000 gallon tank for water supply.

OAK HILL COAL COMPANY

Oak Hill Colliery—January.—Placed pair 2nd motion hoisting engines on New Black Heath slope above crop of vein on south side of Mine Hill Mountain and have 2 lifts established in this slope below water level. Opening old gangways on each lift, east and west of slope.

Erected 3,000 feet of steam line to reach said engines. Line is 8 inches to upper drift opening and 6 inches and 5 inches from there over to No. 3 Black Heath slope.

April.—Renewed head frame at shaft, and built an entirely new tower over shaft.

August.—Remodeled No. 1 breaker by taking out two main screens, two broken screens and two pea screens, and putting in shakers in their place. Also changed position of elevators and removed a number of conveyor lines, puting breaker in better condition to handle product.

Renewed high trestle from No. 1 slope knuckle to breaker with new lumber.

October.—Drove tunnel south from Middle Split to White Ash vein in 5th level to Basin West Section.

BUCK RUN COAL COMPANY

Buck Run Colliery.—Tunnel driven from 4th level, south dip, across basin to Daniels vein, north dip; also tunnel driven on 3rd level, south dip, from Daniels vein to Seven Foot vein.

DARKWATER COAL COMPANY

Newcastle Colliery.—Tunnel driven from north dip, Crosby vein, south to Mammoth vein.

MINE FOREMEN'S EXAMINATIONS

The annual examination of applicants for certificates of qualification as Mine Foremen and Assistant Mine Foremen was held March 23 and 24, in Union Hall, Pottsville.

The Board of Examiners was composed of the following members: M. J. Brennan, Inspector, Pottsville; James B. Neal, Superintendent, Buck Run; Charles Larkin, Miner, Branch Dale; Patrick Grace, Miner, Glen Carbon.

The following applicants passed a satisfactory examination and were granted certificates:

Mine Foremen

John C. Buchanan, Mt. Pleasant, and Arthur Hughes, Glen Carbon.

Assistant Mine Foremen

David E. Jones, Minersville; William E. Job, Minersville; William E. Purcell, Phoenix Park; Patrick F. Maley, Glen Carbon; Charles Schlotman, Pottsville; John J. Reilly, York Tunnel; Goodman J. Brennan, Forrestville.

TWENTIETH DISTRICT

SCHUYLKILL AND DAUPHIN COUNTIES

Lykens, Pa., February 5, 1910.

Hon. James E. Roderick, Chief of Department of Mines:

Sir: I have the honor to transmit herewith my annual report as Inspector of Mines of the Twentieth Anthracite District, for the year ending December 31, 1909. The report gives the statistical information as required by law, and also a brief description of the fatal and non-fatal accidents that occurred during the year.

Respectfully submitted,

CHARLES J. PRICE,
Inspector.

SUMMARY OF STATISTICS

Number of collieries,	7
Number of mines,	30
Number of mines in operation,	26
Number of tons of coal shipped to market,	1,761,240
Number of tons used at mines for steam and heat,	380,687
Number of tons sold to local trade and used by employes,	39,075
Number of tons produced,	2,181,002
Number of tons produced by compressed air machines,	.....
Number of tons produced by electrical machines,	.....
Number of persons employed inside of mines,	3,848
Number of persons employed outside,	1,711
Number of fatal accidents inside of mines,	10
Number of fatal accidents outside,	5
Number of non-fatal accidents inside of mines,	30
Number of non-fatal accidents outside,	8
Number of tons of coal produced per fatal accident inside,	218,000
Number of persons employed per fatal accident inside,	385
Number of persons employed per fatal accident outside,	342
Number of persons employed per non-fatal accident inside,	128
Number of persons employed per non-fatal accident outside,	214
Number of wives made widows,	9
Number of children made orphans,	26
Number of steam locomotives used inside of mines,	1
Number of steam locomotives used outside,	17
Number of compressed air locomotives used inside,	.....
Number of compressed air locomotives used outside,	.....
Number of electric motors used inside,	17
Number of electric motors used outside,	3
Number of fans in use,	22
Number of furnaces in use,	.....
Number of gaseous mines in operation,	25
Number of non-gaseous mines in operation,	1
Number of new mines opened,	2
Number of old mines abandoned,	.....

TABLE A

PRODUCTION OF COAL

Names of Operators	Tons
Philadelphia and Reading Coal and Iron Company,	1,346,529
Summit Branch Mining Company,	832,494
Lehigh Valley Coal Company,	1,979
Total,	2,181,002

Production by Counties

Schuylkill,	1,348,508
Dauphin,	832,494
Total,	2,181,002

TABLE B.—Fatal and non-fatal accidents inside and outside of mines; number of tons of coal produced per accident; number of persons employed; number employed per accident

Names of Operators	Fatal Accidents			Non-Fatal Accidents			Tons of coal produced per fatal accident inside	Tons of coal produced per non-fatal accident inside	Number of employes inside	Number of employes outside	Total number of employes	Number of employes inside per fatal accident	Number of employes outside per fatal accident	Number of employes inside per non-fatal accident	Number of employes outside per non-fatal accident
	Inside	Outside	Total	Inside	Outside	Total									
Philadelphia and Reading Coal and Iron Co.,	8		8	12	3	15	168,316	112,210	2,417	900	3,317	302		201	300
Summit Branch Mining Co.,	2	5	7	17	5	22	416,247	48,970	1,419	796	2,215	709	159	83	159
Lehigh Valley Coal Co.,				1		1	1,979	1,979	12	15	27			12	
Totals and averages for district,	10	5	15	30	8	38	218,000	727,000	3,848	1,711	5,559	385	342	128	214

TABLE C.—Classification of Fatal Accidents Inside and Outside of Mines

	Months													
	January	February	March	April	May	June	July	August	September	October	November	December	Totals	Percentages
Causes of Accidents Inside														
Falls of slate,	2									1		1	4	40.00
Mine cars,			2							1			3	30.00
Falling into slopes, etc.,			1										1	10.00
Miscellaneous,	1		1										2	20.00
Totals,	3		4							2		1	10	100.00
Causes of Accidents Outside														
Cars,				1						1			2	40.00
Suffocation in chutes, etc.,						1							1	20.00
Miscellaneous,	1					1							2	40.00
Totals,	1			1		2				1			5	100.00
Grand totals inside and outside,	4		4	1		2				3		1	15	

TABLE D.—Classification of Non-Fatal Accidents Inside and Outside of Mines

	Months													
	January	February	March	April	May	June	July	August	September	October	November	December	Totals	Percentages
Causes of Accidents Inside														
Falls of coal,		1								1		1	3	10.00
Falls of slate,	2				1	1	2					2	8	26.67
Falls of roof,								1					1	3.34
Mine cars,		2	1			2		1	1	1	1		9	30.00
Explosions of gas,					2								2	6.67
Explosions of powder and dynamite,				1									1	3.33
Falling into shafts,									1				1	3.33
Falling into slopes, etc.,	1												1	3.33
Crushed at batteries,					1								1	3.33
By mules,	1												1	3.33
Miscellaneous,	1											1	2	6.67
Totals,	5	3	1	1	4	3	2	2	2	2	1	4	30	100.00
Causes of Accidents Outside														
Cars,	1		1			1							3	37.50
Machinery,				1									1	12.50
Miscellaneous,	1							1		1	1		4	50.00
Totals,	2		1	1		1		1		1	1		8	100.00
Grand totals inside and outside,	7	3	2	2	4	4	2	3	2	3	2	4	9	

TABLE E.—Occupations of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Inside													
Miners,	2		3							1		1	7
Drivers and runners,										1			1
Laborers,	1												1
Topmen,			1										1
Totals,	3		4							2		1	10
Outside													
Conductors,										1			1
Laborers,	1			1		2							4
Totals,	1			1		2				1			5
Grand totals inside and outside,	4		4	1		2				3		1	15

TABLE F.—Occupations of Persons Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
Inside													
Fire bosses and assistants,												1	1
Miners,	3			1	4	1	1	1		1		1	14
Miners' laborers,								1				2	3
Drivers and runners,	1	1				2			1	1	1		7
Company men,									1				1
Timbermen,	1												1
Loaders,		2	1										3
Totals,	5	3	1	1	4	3	2	2	2	2	1	4	30
Outside													
Blacksmiths and carpenters,								1					1
Engineers and firemen,										1			1
Slatepickers (boys),						1							1
Jig runners,				1									1
Laborers,	2		1								1		4
Totals,	2		1	1		1		1		1	1		8
Grand totals inside and outside,	7	3	2	2	4	4	1	3	2	3	2	4	38

TABLE G.—Nationality of Persons Killed or Fatally Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
American,	2		2			1				3			8
Irish,			1										1
German,				1									1
Hungarian,	2												2
Slavonian,						1							1
Lithuanian,			1									1	2
Totals,	4		4	1		2				3		1	15

TABLE H.—Nationality of Persons Injured Inside and Outside of Mines

	Months												
	January	February	March	April	May	June	July	August	September	October	November	December	Totals
American,	4	3	2	2	2	4	1	3	1	3	2	3	30
English,	1						1						2
German,	2				1								3
Polish,					1								1
Lithuanian,												1	1
Austrian,									1				1
Totals,	7	3	2	2	4	4	2	3	2	3	2	4	38

TABLE I.—Operators and mines, kind of openings, type and size of fans, size of furnaces, volume of air produced by fan or furnace per minute, number of splits of air currents and number of persons employed inside

Names of Operators and Mines	Kind of opening	Gaseous or non-gaseous	Method of ventilation	Diameter of fan in feet and inches	Width of blades in feet and inches	Depth of blades in feet and inches	Number of revolutions per minute	Water gauge developed—in inches	Name of fan	Power used	Number of splits of air currents	Number of cubic feet of air per minute entering the mine at inlet	Total quantity of air per minute circulating in all the splits in cubic feet	Number of cubic feet per minute passing out at outlet	Number of persons employed inside
Philadelphia and Reading Coal and Iron Co.															
Lincoln Colliery:															
Lincoln No. 1,	Slope,	Gaseous,	Fan,	21	7	6	75	1.5	Guibal,	Steam,					
Lincoln No. 2,	Slope,	Gaseous,	Fan,	18	6	5.3	100	1.6	Guibal,	Steam,					
Lincoln No. 2, Vein Trial Slope,	Slope,	Gaseous,	Fan,	12	4	5	110	1.1	Guibal,	Electricity,	12	252,000	251,336	291,000	1,097
Lincoln Water Shaft,	Shaft,	Gaseous,	Fans,	16	4.5	3.8	85	1.2	Guibal,	Steam,					
				12	4	5	88	.7	Guibal,	Steam,					
Brookside Colliery:															
Brookside No. 1,	Slope,	Gaseous,	Fan,	18	6	5	95	1.6							
Brookside No. 2,	Slope,	Gaseous,	Fan,	18	6	5	85	.9	Guibal,	Steam,	21	320,000	300,000	328,000	793
Brookside Shaft,	Shaft,	Gaseous,	Fan,	21	7	6	76	1.9							
Brookside Tender Slope,	Slope,	Gaseous,	Fan,	14	4	5	74	.9							
Good Spring Colliery:															
Good Spring No. 1,	Slope,	Gaseous,	Fan,	18	6	5	90	1.2							
Good Spring No. 2 Tender Slope,	Slope,	Gaseous,	Fan,	18	6	5	90	1.2	Guibal,	Steam,	19	182,928	180,000	185,000	451
Good Spring No. 3,	Slope,	Gaseous,	Fan,	18	6	5	80	.8							
Good Spring Lykens Valley Tunnel,	Tunnel,	Gaseous,	Fan,	15	5	3.5	40	.6							

Valley View Colliery:															
Valley View Tunnel,	Tunnel,	Gaseous,	Fan,	12	4	4	70	.5	Guibal,	Compressed Air,	9	17,600	17,600	17,900	56
Valley View Drift,	Drift,	Non-gas.	Natural,												
Lehigh Valley Coal Co.															
Blackwood Colliery:*															
Blackwood Tunnel,	Tunnel,	Gaseous,	Fan,	20	6	5.9	75	.6	Guibal,	Steam,					
Woods Tunnel,	Tunnel,	Gaseous,	Fan,	20	6	5.9	75	.6							
Dundass Tunnel,	Tunnel,	Gaseous,	Fan,	12	4	3	120	.2							
Blackwood No. 4,	Tunnel,	Gaseous,	Fan,	12	4	3	120	.2							
Summit Branch Mining Co.															
Short Mountain Colliery:															
Short Mountain Slope,	Slope,	Gaseous,	Fan,	25	8	7	60	1.4	Guibal,	Steam,	16	204,000	198,000	216,000	855
Lykens Valley Slope,	Slope,	Gaseous,	Fan,												
Underground Slope No. 4,	Slope,	Gaseous,	Fan,	25	8	7	60	1.5							
Drift No. 1,	Drift,	Gaseous,	Fan,												
Drift No. 2,	Drift,	Gaseous,	Fan,	16	4	4	50	.7							
Bear Gap Tunnel,	Tunnel,	Gaseous,	Fan,												
Williamstown Colliery:															
Williamstown No. 1 Shaft,	Shaft,	Gaseous,	Fan,	25	8	7	60	1.4	Guibal,	Steam,	19	172,000	165,000	185,000	564
Williamstown No. 2 Shaft,	Shaft,	Gaseous,	Fan,	25	8	7	60	1.6							
Williamstown Bear Valley Slope,	Slope,	Gaseous,	Fan,	14	4	4	60	.9							
Williamstown No. 3 Slope,	Slope,	Gaseous,	Fan,	25	8	7	60	1.6							
Williamstown Summit Tender Slope,	Slope,	Gaseous,	Fan,	14	4	4	60	.4							
Williamstown Big Lick,	Slope,	Gaseous,	Fan,												

*Breaker idle the entire year.

TABLE 1.—Operators, location of collieries, railroads, etc.

Names of Operators and Collieries	County	Name of General Superintendent	Post Office	Name of Superintendent	Post Office	Railroad to Mine
Philadelphia and Reading Coal and Iron Co.						
Lincoln,	Schuylkill,	W. J. Richards,	Pottsville,	Reese Tasker, Mining Supt.	Pottsville,	Philadelphia and Reading
Brookside,				E. E. Kaercher, Division Supt.	Pottsville,	
Good Spring,				J. H. Lee, Outside Supt.	Tremont,	
Valley View,				John Lorenz, Inside Supt.	Tremont,	
Rausch Creek Washery,						
Middle Creek Washery,						
Lehigh Valley Coal Co.						
Blackwood,	Schuylkill,	S. D. Warriner,	Wilkes-Barre,	Wiliam Underwood,	Blackwood,	Lehigh Valley
Summit Branch Mining Co.						
Short Mountain,	Dauphin,	R. A. Quin,	Wilkes-Barre,	William Auman, Michael Readdy, Inside Supt.	Lykens,	Pennsylvania
Williamstown,						
Short Mountain Washery,						
Williamstown Washery,						

TABLE 2.—Number of tons of coal mined, number of days worked, number of persons employed, number killed and injured, quantity of powder, dynamite and so-called safety explosives used, etc.

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Explosives: Number of pounds of powder used	Explosives: Number of pounds of dynamite used	Number of horses and mules
Philadelphia and Reading Coal and Iron Co.,												
Lincoln,	Schuylkill,	400,919	69,968	7,832	478,719	219	1,346	4	6	193,050	61,091	122
Brookside,		304,157	40,807	.....	344,964	232	1,053	4	5	47,350	46,784	119
Good Spring,		233,373	85,627	5,926	324,926	226	652	....	3	34,450	111,280	66
Valley View,		.....	.....	438	438	.....	71	....	....	1,750	20,927	4
		938,449	196,402	14,196	1,149,047	.....	3,122	8	14	276,600	240,082	311
Washeries												
Rausch Creek,	Schuylkill,	92,727	7,799	.....	100,526	125	83	....	.....	.....	25	.....
Middle Creek,		86,465	9,715	776	96,956	123	112	....	1	.....	4	2
		179,192	17,514	776	197,482	.....	195	....	1	.....	29	2
Totals,		1,117,641	213,916	14,972	1,346,529	.....	3,317	8	15	276,600	240,111	313
Summit Branch Mining Co.												
Short Mountain,	Dauphin,	303,465	32,439	15,283	351,187	255	1,177	2	16	103,975	36,197	130
Williamstown,		234,179	94,587	5,186	333,952	264	965	5	6	106,275	79,930	91
		537,644	127,026	20,469	685,139	.....	2,142	7	22	210,250	116,127	221

TABLE 2—Continued

Names of Operators and Collieries	County	Number of tons of coal shipped to market	Number of tons used at collieries for steam and heat	Number of tons sold to local trade and used by employes	Total production of coal in tons	Number of days worked	Number of employes	Number of fatal accidents	Number of non-fatal accidents	Explosives		Number of horses and mules
										Number of pounds of powder used	Number of pounds of dynamite used	
Washeries:												
Short Mountain,	Dauphin,	74,027	36,322	2,195	112,544	367	28					
Williamstown,		31,928	1,675	1,208	34,811	307	45					
		105,955	37,997	3,403	147,355		73					
Totals,		643,599	165,023	23,872	832,494		2,215	7	22	210,250	116,127	221
Lehigh Valley Coal Co.												
Blackwood,	Schuylkill,		1,748	231	1,979	*	27		1		560	11
Grand totals,		1,761,240	380,687	39,075	2,181,002		5,559	15	38	486,850	356,798	545

*Breaker idle the entire year.

TABLE 2.—Part 2.

Names of Operators	County	Number of Boilers					Locomotives			Number of steam engines of all classes	Total horse power	Number of pumps delivering water to surface	Capacity in gallons per minute	Quantity delivered to surface per minute—gallons	Number of electric dynamos	Number of air compressors
		Cylindrical	Horse power	Tubular	Horse power	Total horse power	Steam	Air	Electric							
Philadelphia and Reading Coal and Iron Co.,	Schuylkill,	42	1,614	46	5,750	7,364	8	------	6	52	12,791	10	15,520	5,243	4	3
Summit Branch Mining Co.,	Dauphin,	5	710	106	11,540	12,250	6	------	9	121	11,766	9	14,680	4,386	4	4
Lehigh Valley Coal Co.,	Schuylkill,	----	----	11	1,600	1,600	4	------	5	13	------	------	------	------	------	------
Totals,		47	2,324	163	18,890	21,214	18	------	20	186	24,557	19	30,200	9,629	8	7

TABLE 3.—Number of each class of employes inside and outside of mines

Names of Operators	County	Inside											Outside									Grand total inside and outside
		Mine foremen	Assistant mine foremen	Fire bosses and assistants	Miners	Miners' laborers	Drivers and runners	Doorboys and helpers	Pumpmen	Company men	All other employes	Total inside	Superintendents	Foremen	Blacksmiths and carpenters	Engineers, and firemen	Slate pickers (boys)	Slate pickers (men)	Bookkeepers and clerks	All other employes	Total outside	
Philadelphia and Reading Coal and Iron Co.,	Schuylkill,	8	49	----	672	302	153	36	4	489	713	2,417	----	10	47	130	90	18	14	591	900	3,317
Summit Branch Mining Co.,	Dauphin,	3	8	15	526	145	125	20	25	51	501	1,419	3	4	48	138	113	2	12	476	796	2,215
Lehigh Valley Coal Co.,	Schuylkill,	3	6	----	----	----	----	----	----	2	1	12	1	2	1	4	----	----	1	6	15	27
Totals,		14	54	15	1,198	447	278	56	29	542	1,215	3,948	4	16	96	272	203	20	27	1,073	1,711	5,559

TABLE 3.—Part 2

Names of Operators	County	Average Number of Days Worked in Breaker												
		January	February	March	April	May	June	July	August	September	October	November	December	Total
Philadelphia and Reading Coal and Iron Co.,	Schuylkill,	21	18	24	22	17	14	12	15	14	21	24	24	226
Summit Branch Mining Co.,	Dauphin,	20	19	24	21	20	23	21	23	23	22	21	23	260

TABLE 4.—Fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Number of widows	Number of orphans	Name of Colliery	County	Nature and Cause of Accident in Brief
Jan. 5	Daniel Herb,	American,	Miner,	35	M.	1	6	Brookside,	Schuylkill,	Instantly killed by fall of slate while robbing pillars in No. 4 vein.
19	Joseph Hobat,	Hungarian,	Laborer,	25	S.			Williamstown,	Dauphin,	Smothered by rush of culm on dirt bank at washery. Outside.
	Paul Matty,	Hungarian,	Laborer,	35	M.	1	3	Brookside,	Schuylkill,	Instantly killed by being caught between cage and shaft timber at bottom of shaft.
27	Grant Bender,	American,	Miner,	35	M.	1	3	Lincoln,	Schuylkill,	Fatally injured by fall of slate in No. 4 vein east, while robbing pillars.
March 9	Alex. Shumecker,	Lithuanian,	Miner,	23	M.	1		Brookside,	Schuylkill,	Fatally injured by being squeezed between mine car and rib on gangway.
16	William Lehr,	American,	Miner,	38	M.	1	4	Lincoln,	Schuylkill,	Fatally injured by gob pushing in on him while robbing pillars.
23	John A. Garis,	American,	Topman,	43	M.	1	5	Lincoln,	Schuylkill,	Fatally injured by being squeezed between mine car and rib at top of underground slope.
26	John Butler,	Irish,	Miner,	41	W.		1	Williamstown,	Dauphin,	Fatally injured by falling down manway of breast.
April 12	Jacob C. Miller,	German,	Laborer,	72	M.	1		Williamstown,	Dauphin,	Fatally injured by being run over by mine car at head of breaker. Outside.
June 15	James Kauder,	Slavonian,	Laborer,	22	S.			Williamstown,	Dauphin,	Instantly killed by a rush of rock and culm in dirt bank at washery. Outside.
	Harry F. Trout,	American,	Laborer,	17	S.			Short Mountain,	Dauphin,	Smothered in boiler coal bin of seperator at Short Mountain breaker. Outside.
Oct. 19	William Bryer,	American,	Miner,	29	M.	1	3	Brookside,	Schuylkill,	Instantly killed by fall of slate while driving a manway to main heading.
23	Harry Shadle,	American,	Car-runner,	19	S.			Lincoln,	Schuylkill,	Fatally injured between mine cars at foot of slope.
25	Walter Hand,	American,	Locomotive conductor,	25	M.	1	1	Short Mountain,	Dauphin,	Fatally injured by falling under mine cars near breaker. Outside.
Dec. 21	Anthony Yuckuncis,	Lithuanian,	Miner,	24	S.			Williamstown,	Dauphin,	Fatally injured by a fall of slate at face of his breast.

TABLE 5.—Non-Fatal accidents inside and outside of mines

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Colliery	County	Nature and Cause of Accident in Brief
Jan. 5	Cyrus Shamper,	American,	Laborer,	31	M.	Brookside,	Schuylkill,	Arm broken and face badly cut by being struck by derrick handle. Outside.
14	Carl Yanns,	German,	Miner,	29	M.	Short Mountain,	Dauphin,	Collar bone fractured and side bruised by fall of slate at face of breast.
	Irvin Lehman,	American,	Laborer,	18	S.	Lincoln,	Schuylkill,	Leg broken by mine cars while uncoupling them near breaker. Outside.
19	Daniel Fritz,	German,	Miner,	43	M.	Short Mountain,	Dauphin,	Compound fracture of left leg by fall of slate at face of breast.
	Charles Boe,	American,	Timberman,	32	S.	Lincoln,	Schuylkill,	Leg broken above ankle by jumping from platform to ground on gangway.
	John Conners,	English,	Miner,	52	M.	Brookside,	Schuylkill,	Back injured by falling down chute.
23	Thomas Herb,	American,	Driver,	19	S.	Good Spring,	Schuylkill,	Leg fractured and body bruised by being dragged by mule.
Feb. 4	Fred. W. Klinger,	American,	Driver,	22	M.	Short Mountain,	Dauphin,	Right foot crushed by mine cars.
5	George B. Heinbach,	American,	Loader,	20	M.	Lincoln,	Schuylkill,	Arm fractured by fall from mine car.
20	Lloyd Watkins,	American,	Loader,	20	S.	Williamstown,	Dauphin,	Small bone of left leg broken. Struck by lump of coal.
March 16	James Lyons,	American,	Loader,	21	S.	Good Spring,	Schuylkill,	Right leg fractured. Caught between mine car and spreader.
26	Roy Faust,	American,	Laborer,	26	S.	Middle Creek,	Schuylkill,	Arm broken at wrist while opening car brake. Outside.
April 17	Robert Adams,	American,	Miner,	27	M.	Williamstown,	Dauphin,	Hands and face burned by explosion of powder.
19	George Sheerer,	American,	Jig-man,	29	M.	Short Mountain,	Dauphin,	Right arm broken. Caught in conveyor line. Outside.
May 12	Fred Saundt,	German,	Miner,	29	M.	Short Mountain,	Dauphin,	Muscles torn from backbone by rush of coal at battery.
17	Thomas Evans,	American,	Miner,	45	M.	Good Spring,	Schuylkill,	Leg fractured by fall of slate at face of breast.

TABLE 5—Continued

Date of accident	Name of Person	Nationality	Occupation	Age	Married or single	Name of Colliery	County	Nature and Cause of Accident in Brief
May 22	Charles Huyler,	Polish,	Miner,	38	M.	Williamstown,	Dauphin,	Hands and face slightly burned by explosion of gas.
27	Howard Heinbach,	American,	Miner,	28	S.	Lincoln,	Schuylkill,	Hands and face slightly burned by explosion of gas.
June 7	Joseph Engle,	American,	Driver,	24	M.	Short Mountain,	Dauphin,	Internally injured by being squeezed between mine car and timber.
22	Jacob Sheiley,	American,	Miner,	56	S.	Short Mountain,	Dauphin,	Nose broken, scalp wounded and back injured by fall of slate at face while robbing pillars.
28	Charles Engle,	American,	Driver,	24	S.	Short Mountain,	Dauphin,	Forepart of left foot crushed by mine cars.
30	William M. Byerly,	American,	Breaker boy,	15	S.	Williamstown,	Dauphin,	Right leg injured by being squeezed between mine cars. Outside.
July 26	Matt. Thompson,	English,	Miner,	46	M.	Short Mountain,	Dauphin,	Right hip dislocated and back injured by fall of slate at face of breast.
28	Morris Swahn,	American,	Miner,	37	M.	Lincoln,	Schuylkill,	Collar bone broken and head badly bruised by fall of slate at face of breast.
Aug. 11	Daniel Rettinger,	American,	Carpenter,	66	M.	Short Mountain,	Dauphin,	Nose and upper jaw broken by flying plank from saw. Outside.
26	John Stahl,	American,	Miner,	35	M.	Brookside,	Schuylkill,	Head cut, back bruised and rib cracked by fall of rock.
31	Alvin Ossman,	American,	Laborer,	34	M.	Short Mountain,	Dauphin,	Shoulder badly bruised and three ribs broken by falling under mine truck.
Sept. 5	William Miller,	American,	Company man,	20	M.	Williamstown,	Dauphin,	Right leg fractured, shoulder bruised and scalp wounded by falling down shaft.
8	John Pydus,	Austrian,	Driver,	42	M.	Short Mountain,	Dauphin,	Left collar bone broken by falling between mine car and mule.
Oct. 11	James Pell,	American,	Engineer,	28	M.	Short Mountain,	Dauphin,	Legs severely scalded by escaping steam. Outside.

Oct.	15	Frank Behm,	American,	Miner,	39	M.	Lincoln,	Schuylkill,	Small bone in foot fractured by falling coal at face of breast.
	26	Edward Hummel,	American,	Driver,	20	S.	Brookside,	Schuylkill,	Internally injured by falling under mine car.
Nov.	6	Harry Esterline,	American,	Driver,	30	M.	Short Mountain,	Dauphin,	Right collar bone fractured. Caught between mine car and prop.
	15	Milton Lenker,	American,	Laborer,	30	M.	Short Mountain,	Dauphin,	Left eye injured by flying metal and had to be removed. Outside.
Dec.	2	Peter Marzick,	Lithuanian,	Miner,	45	S.	Williamstown,	Dauphin,	Back broken and chest injured by fall of coal at face of breast.
	7	Joseph Zerbe,	American,	Fire boss,	35	M.	Blackwood,	Schuylkill,	Instep badly cut by an ax while making set of timber.
	14	William Bixler,	American,	Laborer,	20	S.	Short Mountain,	Dauphin,	Left leg fractured by fall of slate at face of gangway.
		John Bechtel,	American,	Laborer,	31	M.	Brookside,	Schuylkill,	Arm broken and head and foot cut by fall of slate at face of gangway.

CONDITION OF COLLIERIES

PHILADELPHIA AND READING COAL AND IRON COMPANY

Lincoln, Brookside, Good Spring and Valley View.—General condition good. Ventilation and drainage good. Condition as to safety, good.

The officials of this company are to be commended for the very excellent condition in which they keep their roads in the mines, thus making transportation easy.

SUMMIT BRANCH MINING COMPANY

Short Mountain.—General condition good. Ventilation good; drainage, fair. Condition as to safety, good.

Williamstown.—General condition good. Ventilation and drainage fair. Condition as to safety, good.

LEHIGH VALLEY COAL COMPANY

Blackwood.—Breaker was idle the entire year. Production was used for boiler fuel and sold to employes.

IMPROVEMENTS

PHILADELPHIA AND READING COAL AND IRON COMPANY

Lincoln Colliery.—A tunnel, 669 feet long, was driven from Lykens Valley No. 4 vein to Lykens Valley No. 2 vein on 8th lift, No. 1 slope.

A sump gangway, 642 feet long, was driven on No. 2 vein, 6th lift, and a tunnel 197 feet long was driven to connect sump gangway with water shaft.

A 21-foot fan was erected on Lykens Valley No. 5 vein to ventilate the 7th and 8th lift workings.

A 200 horse power electric hoist installed at No. 5 vein, inside slope.

An extension was made to the electric power house and a 23-inch by 30-inch Erie engine installed.

An ash flume to carry ashes from boiler house by gravity is being erected.

An 8-inch bore hole, 337 feet deep, for fresh water supply has been completed. A bore hole, 12 inches in diameter, is now being drilled and has reached a depth of 281 feet.

A 10-inch bore hole, 504 feet long, for slush has been drilled from a point east of breaker to No. 1 vein, 4th lift workings.

Valley View Colliery.—A water level tunnel was driven from surface, a distance of 2542 feet to West No. 5 vein gangway, No. 4 slope level, West Brookside Colliery, cutting all veins between Diamond

vein and Lykens Valley No. 5 vein. Gangways are being driven on Primrose, Holmes, Middle Split and Skidmore veins. A 12-foot fan has been placed temporarily at the mouth of the tunnel.

Good Spring Colliery.—A tunnel, 74 feet long, was driven from Seven Foot vein to Skidmore, No. 3 slope, 2nd lift, east side.

A tunnel, 1,497 feet long, from Holmes, south dip, to Tracy, north dip, has been completed. A tunnel, 454 feet long, was driven from Mammoth vein to Orchard vein in 2nd lift, No. 3 slope.

A tunnel, 56 feet long, was driven from Holmes to Primrose, No. 3 slope, 1st lift. A supply store house, 23 feet by 98 feet, has been erected. A 21-foot fan is being erected on Bottom Split of Mammoth vein at No. 1 slope, to replace the 18-foot one now in use.

Brookside Colliery.—A tunnel was driven from No. 5 vein to shaft on 3rd lift, a distance of 432 feet; also a back switch on the south side of shaft, 33 feet long.

A stable that will hold 34 mules has been built on No. 4 Basin slope, 4th lift. No. 1 slope has been extended 230 feet to 1st lift of No. 1 Basin slope and No. 1 Basin slope abandoned. A set of return tubular boilers is being installed at East Brookside and one at West Brookside. A 12-inch steam line is being erected from the east boilers to the west breaker and will displace a number of smaller lines.

Middle Creek Washery.—A set of return tubular boilers has been erected. The Swatara dirt banks are being loaded into railroad cars and taken to Middle Creek Washery to be cleaned. A 16 by 30-inch engine, 2 locomotive boilers and a number of scraper lines were installed to load the culm into cars.

Short Mountain Colliery.—Tunnels were driven in No. 3 level, No. 7 counter, No. 4 slope, Bear Gap slope, and in No. 4 slope extension. Electric haulage was installed in No. 2 counter and electric light line on No. 3 level. New pump house built in No. 4 slope extension. New column and steam line installed in No. 4 slope.

Outside.—A large wash house erected for the miners. New water tanks installed and fresh water pumping plant enlarged. Fire line laid to breaker. 112 new mine cars added to rolling stock. The company purchased some Draeger rescue apparatus for use in case of fire inside and the men will be instructed how to use it.

Williamstown Colliery.—Tunnels were driven in Bear Valley slope counter, No. 1 shaft counter to No. 1 shaft proper, No. 1 shaft bottom to Bear Valley slope 3rd lift, from No. 9½ vein to No. 11 vein; air tunnel from No. 9 to No. 11 vein; tunnel from No. 9 to No. 7 vein; North tunnel from No. 2 shaft counter to No. 1 shaft. Several new airways have been made inside and the general condition has been improved.

Outside.—A new boiler house erected. New plane from washery to breaker and from breaker to boiler house. 121 new mine cars have been added to the rolling stock, and the breaker is now undergoing extensive repairs. Draeger rescue apparatus has also been purchased by the Company.

LEHIGH VALLEY COAL COMPANY

Blackwood Colliery.—The breaker was idle the entire year. The Company, however, removed a great deal of mine timber in Blackwood tunnel and replaced it with iron with concrete backing.

MINE FOREMEN'S EXAMINATIONS

The annual examination of applicants for certificates of qualification as Mine Foremen and Assistant Mine Foremen was held in Union Hall, Pottsville, March 23 and 24. The oral examination was held at Lykens, April 1, 2 and 3.

The Board of Examiners was composed of the following members: William Auman, Superintendent, Lykens; W. C. Wagner, Miner, Tower City; Samuel Evans, Miner, Minersville, and Charles J. Price, Inspector, Lykens.

The following persons passed a satisfactory examination and were granted certificates:

Mine Foremen

Charles E. Allen and John Farrel, Tower City, and Henry A. Culbert, Reinerton.

Assistant Mine Foremen

John D. Fesler, Reinerton; Willoughby F. Geist, Orwin; Walter Potieher and John Leonard, Tower City, and John N. Snyder, Williamstown.

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